PLANT PATENT

HEARING

BEFORE THE

SUBCOMMITTEE ON PATENTS, TRADEMARKS, AND COPYRIGHTS

OF THE

COMMITTEE ON THE JUDICIARY UNITED STATES SENATE

EIGHTY-SIXTH CONGRESS

FIRST SESSION

PURSUANT TO

S. Res. 53

ON

S. 1447

TO AMEND SECTION 161, TITLE 35, UNITED STATES CODE, WITH RESPECT TO PATENTS FOR PLANTS

JULY 9, 1959

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PLANT PATENT

THURSDAY, JULY 9, 1959

U.S. SENATE,
SUBCOMMITTEE ON PATENTS, TRADEMARKS, AND
COPYRIGHTS OF THE COMMITTEE ON THE JUDICIARY,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m., in room 228, New Senate Office Building, Senator Philip A. Hart presiding.

Present: Senator Hart.

Also present: George S. Green, professional staff member, and Robert L. Wright, chief counsel, Patents, Trademarks, and Copyrights Subcommittee.

Senator HART. The committee will be in order.

Mr. GREEN. Mr. Chairman, this is the time set for hearing on S. 1447, to amend section 161, title 35, United States Code, with respect to patents for plants.

Notice of this hearing was published in the Congressional Record on the 18th day of June 1959, and pursuant to that notice the hearing is to be held at this time.

At this point, Mr. Chairman, I should like to insert into the record a copy of the bill, S. 1447.

Senator HART. The bill will be inserted.

(The bill is as follows:)

[S. 1447, 86th Cong., 1st sess.]

A BILL To amend section 161, title 35, United States Code, with respect to patents for plants

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the first paragraph of section 161, title 35, United States Code, is amended to read as follows:

"Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a plant found in an uncultivated state, may obtain a patent therefor, subject to the conditions and requirements of this title."

Mr. GREEN. There have been a number of witnesses who signified a desire to testify. With your permission, Mr. Chairman, I desire to read that list, and ask those called to please indicate that they are here.

For the Department of Agriculture, Dr. M. D. Maclay, Dr. F. P. Cullinan, and Mr. T. A. Seegrist.

From the Department of Commerce, the Honorable Robert C. Watson, Mr. A. J. Goldberg, and Mr. Thomas F. Murphy.

Persons listed as proponents of this legislation will please answer to their name.

Mr. M. K. Hobbs.

Mr. HOBBS. Present.

Mr. GREEN. Frederick J. Meyer.

Mr. MEYER. Yes.
Mr. GREEN. Mr. Al Mercker.
Mr. MERCKER. Present.
Mr. GREEN. Dr. Ora Smith.
Dr. SMITH. Present.
Mr. GREEN. Mr. Pen Picha.
Mr. PICHA. Here.
Mr. GREEN. Mr. A. R. Miesen, agricultural development agent, Northern Pacific Railway Co.
(No response.)
Mr. GREEN. Mr. Don Palmer.
(No response.)
Mr. GREEN. Mr. Bruce Gray.
(No response.)
Mr. GREEN. Opponents to the legislation who have indicated a desire to appear are Mr. Mat W. Felton, Mr. Lowell H. Swenson, and Mr. Harold Kutzner.
(No response.)
Mr. GREEN. I believe, Mr. Chairman, with your permission it would be best to start with proponents of the legislation.
Mr. HART. Very well. Mr. Hobbs.
May I explain that the subcommittee chairman, Senator O'Mahoney, because of illness has asked that I act in his stead. Additionally, the reason we have scheduled this hearing, notwithstanding the fact that we are at this point in the Senate Calendar where predictability, if it ever did attach to what will happen in the Senate, has passed, and all we can be sure of is that we are subject to interruptions.
It was the strong desire of Senator Wiley, a member of this subcommittee, that we do give attention to this piece of legislation. I think in fairness it should be said that we meet largely because Senator Wiley urged it strongly.
This afternoon the order of the Senate, or rather today the Senate will convene at 11, and a Tennessee Valley Authority bill is the order of business. The junior Senator from Michigan for many reasons has to protect his flanks on the floor during that debate, so that I would appreciate very much if any witness is in position to do it, that he file a statement, which will be printed in full in the record, and make summary of the points which he feels are most important in his presentation.
This does not preclude reading in full the statement if that is the witness' desire, or if he believes that is the only way he can effectively present his position, but it may mean that we will have to adjourn without concluding the list of witnesses, and resume later, or ask those witnesses to submit statements for the record.
I am satisfied that as informal an atmosphere as we can generate in this rather formidable setting will help all of us to come to a better understanding of the bill, so, Mr. Hobbs, if you will state your name and your official position, your address, and then fire away, we will get started.

STATEMENT OF M. K. HOBBS, PATENT ATTORNEY, WINTER PARK, FLA.

Mr. HOBBS. Thank you, sir.
My name is M. K. Hobbs. Presently I reside in Winter Park, Fla. I am in semiretirement after the practice of patent law for some 35 years in Wisconsin and in Chicago.
Subsequent to the enactment of the Plant Patent Act in May of 1930, I have represented individual plant breeders, and one of the largest wholesale nurseries in the country.
I mention this not to claim any special qualifications, but rather to indicate a wholesome interest in the subject matter.
I have prepared the specifications for several plant patents.
In a brief which was submitted to this committee, there was summarized faithfully a legislative history of the Plant Patent Act. I have extra copies of that brief if there is anyone who wishes a copy.
Mr. HART. Mr. Hobbs, I take it it is a little difficult for some of the witnesses at the rear of the room to hear, and since the box has been moved close, if you will switch that switch, if we are lucky it may work.
Mr. HOBBS. The Secretary of Agriculture reported in 1930, in answer to an official inquiry about the proposed Plant Patent Act, that it—

would appear to be desirable and to lend far-reaching encouragement to agriculture and benefit the general public.

The Senate committee report on the Plant Patent Act of 1930 stated, and again I quote:

The purpose of the bill is to afford agriculture, so far as practicable, the same opportunity to participate in the benefits of the patent system as has been given to industry, and thus assist in the placing of agriculture on a basis of economic equality with industry.

In view of the shortness of time, I am omitting some of the things I expected to say that are the least important.
Mr. HART. They will be made a part of the record in full.
Mr. HOBBS. All right.
I would like to call attention, however, to the fact that in the House, where there was a companion bill to the Townsend bill in the Senate, Mr. Cannon supported the Plant Patent Act of 1930 and said there was no greater benefactor to the human race than the man who produces a new fruit or a new vegetable.
This brings us to the specific purpose of the amendment proposed by S. 1447.
The statutes permit the granting of plant patents for new and distinct varieties of asexually reproduced plants, except tuber-propogated plants. By this exception, the act failed to accomplish its complete objective; namely, in the words of the Senate committee report—

to remove discrimination between plant developers and industrial inventors.

Now, very shortly after the passage of this Plant Patent Act of 1930, members of the bar and plant breeders raised the question, why the exception? No one had a satisfactory answer. Robert Starr Allyn, of the New York bar, in 1934 wrote:

Just why tuber-propagated plants have been barred we have not been able to understand.

Col. Lawrence C. Kingland, of St. Louis, a former Commissioner of Patents, and himself a farmer on a modest scale, wrote a letter to a member of this committee on June 12 of 1959, sending me a copy of his letter, in which he said, and I want to read two short paragraphs of it:

> During my term as Commissioner of Patents, I was called upon to make several talks before groups interested in plant patents, and at that time reviewed the background for the section of the Patent Act covering this subject. Even then I was unable to find any reason for the exclusion of tuber-propagated plants. It seems to me there is no logic whatever in making distinction between plants within the protection and tuber-propagated plants without the protection.
>
> I feel that the inequity that has resulted to plant developers under the present law should be promptly corrected, and I look forward to Congress passing the amendment to the act without undue delay.

The present Commissioner of Patents closes his letter to Senator O'Mahoney as follows:

> The Patent Office can offer no valid objection to the proposal.

Now, in the Senate committee report of 1930, this statement is found:

> The term "tuber" is used in its narrow, horticultural sense as meaning a short, thickened portion of an underground branch. It does not cover, for instance, bulbs, corms, stolons, and rhizomes. Substantially the only plants covered by the term "tuber propagated" would be the Irish potato, and the Jerusalem artichoke. This exception is made because this group alone, among asexually reproduced plants is propagated by the same part of the plant that is sold as food.

Now, I highly respect this Senate committee report of 1930, but there are two errors in the statement that was just made. The first one is that there are several important tuber-propagated plants in addition to the Jerusalem artichoke and the Irish potato; namely, the taro, cultivated in Southern States and sold in the markets as dasheen.

Senator HART. What is that?

Mr. HOBBS. Taro. The caladium, the canna, the tuber rose, and several members of the huge lily family.

The second error is that under the act as it exists, a patent may issue on a sweet-potato plant, which is not a tuber, and on an onion plant, which also is not a tuber, but a bulb.

Each of these plants reproduces by the same part of the plant that is sold as food, so the statement that the exception is made because the plants that are excepted are the ones that reproduce by the part sold as food does not follow through.

In his letter to this committee, Commissioner of Patents Watson called attention to the fact that patents are granted on foods and medicines. Illustrative of patents on food products are patented shortenings, frozen confections, breakfast foods, certain breads; on pharmaceuticals there are patents now on penicillin and many vitamin products, and in the past there was the famous patent on aspirin, declared valid by the courts.

Literally hundreds of plant patents have issued on food-bearing plants. Strawberries, peaches, plums, oranges, pecans, grapefruit—almost any fruit that one can name.

Let me give you just one illustration of how this Plant Patent Act works. In Wisconsin, it is cold by Armistice Day. Vegetables have been cropped, the grain harvested, deciduous trees have shed their leaves, and yet on Armistice Day in Madison at a convention there were exhibited freshly grown and freshly picked strawberries grown

by A. E. Lang, of Dodgeville. Every other variety of strawberry in that area was dead or dormant at that time.

Mr. Lang secured Plant Patent No. 1745 in 1958 on his new frost-resistant variety. It is unusual in Wisconsin to have fresh local grown strawberries in November.

Now, strawberries are important. How much more important it would be if under the incentive of reward and protection a disease-free potato were discovered, or a double-yield potato, or a potato that will mature in half the time.

The observation that literally hundreds of patents have issued on fruit or nut-bearing plants should be coupled with the statement of the Department of Agriculture, and I quote from its letter of March 12 to this committee:

> There is no evidence that the patenting of plants has increased the cost of food to the consumer.

One of the points made in the Senate committee report on the plant Patent Act of 1930 was that plant breeding and research have largely been dependent on the Government. It has been particularly so with the potato, and the Department of Agriculture has done a remarkable job, but it hasn't yet, and I don't think it claims to have come up with the perfect potato.

Under proper incentive, and at his own expense and not the taxpayers', one of the several potato breeders in this country may well do just that.

Several persons have inquired of me and of others how a patent on a new potato plant could be protected. The Department of Agriculture has raised that question in respect to the proposed amendment. Obviously this isn't the concern of Congress. No agency of the Government has any right, interest, or obligation to protect a patent once it has been granted by the Commissioner. The problem is solely that of the patent owner, whether the patent be on the machine, composition of matter, or any new plant.

The question has also been asked how one variety of potato may be distinguished from another. The Department of Agriculture is credited with the development of some 70 new varieties of the potato since the first Plant Patent Act in 1930. These varieties obviously were identifiable by the Department of Agriculture.

Under the law, the Department of Agriculture is obligated to advise the Commissioner of Patents as to whether a plant upon which a patent is sought is new and distinct as required by the statute.

This obligation would continue if the proposed amendment were adopted, and the bill makes no change in this regard.

If a potato, upon which a patent is sought, is sufficiently new and distinct to warrant the granting of a patent, such new variety can be identified because of its new and distinct characteristics, and such new variety could be followed into the hands of the infringer.

Anyone can tell the rose of Plant Patent No. 1. It is the only ever-blooming, climbing rose.

Even an untrained person can spot the strawberry of the Parish patent, for it is the only strawberry without a hollow core, or a white center. It is crimson all the way through.

The question has also been asked how will a patent on a potato plant work. The patentee himself will raise or license others to raise

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certified seed potatoes, and nurseries or seed houses will sell them. The potatoes that are used commercially, I understand, for planting are certified seed, and that is the way the thing would operate, he who gets a patent on a potato will license others or himself to raise the certified seed which nursery houses would sell.

The Senate committee report of the Plant Patent Act of 1930 gave at least seven reasons why that bill was in the public benefit. Each one of these reasons is applicable to the proposed amendment to include the tuber-propagated plant among those patentable.

In conclusion, permit me to summarize those reasons in seven short sentences.

While the language in the committee report was general, and applied to all plants that were patentable, just by the mere substitution of the word "tuber" for "plant," those reasons that applied in 1930 are exactly applicable now.

1. The plant breeder has no adequate financial incentive. A new variety, once it has left his hands, may be reproduced unlimitedly by all.
2. Plant breeding and research is dependent on the Government in large measure.
3. New varieties will be made promptly available for there will be no reason to withhold them.
4. Plant development by private funds will be stimulated.
5. The food and forest supply of the Nation is becoming dependent on new varieties, citing the peach disease which threatened Georgia, and the white-pine blister as illustrating the need for disease-resistant varieties.
6. Plant breeding is fundamentally connected with the Nation's food supply.
7. Plant patents mean better agricultural products that will give the public more actual value for its dollar.

Now, other witnesses which will follow me will advise the committee about the uses of the potato, and the need for getting a getter and possibly perfect potato.

Senator HART. Thank you very much, Mr. Hobbs.

May I ask one question?

Mr. HOBBS. Yes, sir.

Senator HART. You have emphasized that the potato would be the food product which we in your judgment could anticipate expanding research and development on if the bill was adopted, and you mentioned artichokes, too.

Is there any other food product which would become patentable under this bill?

Mr. HOBBS. I am not a horticulturalist, but I know——

Senator HART. I am not a horticulturalist or a patent lawyer, so be very patient with me.

Mr. HOBBS. The taro which I mentioned is another one. Now, I am new to the State of Florida, but that was one of the first things I became acquainted with. It is sold on the market as dasheen.

You buy the sprouts, which are like asparagus, and you eat those. You can buy the tuber, itself, which is a starchy thing like a potato, and it is raised quite commonly in the Southern States and sold on the market.

Now, in my limited knowledge, the potato—and I mean the Irish potato, because the sweet potato would be patentable under the act—the Irish potato, the Jerusalem artichoke, and the taro.

Now, some of the scientific experts can expand on what I said in that regard.

Senator HART. Happily the committee has skills in patent lawyers and horticulturalists.

Mr. GREEN. Mr. Hobbs, do you suppose the fact of patenting potatoes would in anyway increase the cost to consumers of those particular goods?

Mr. HOBBS. Well, I have my own opinion on that, which I will state first, that if we get a better potato, more yield, more disease resistant, the greater yield, and the less hazard are going to make more potatoes available. That is my own speculation and judgment based on experience.

But then I come back in my second answer to your question, the statement in a letter to this committee from the Department of Agriculture.

> There is no evidence that the patenting of plants has increased the cost of food to the consumer.

Mr. GREEN. How many varieties of potatoes are being produced and marketed at the present time?

Mr. HOBBS. I would much prefer if you asked that question of someone who knows potatoes much better than I do. I know four or five varieties of potatoes, and that is all. I read in the seed catalogs about the Katahdin, Chippewa, Pontiac, the Idaho, and new improved Chippewa, but I can't begin to enumerate all of them.

Mr. GREEN. You know of no reason presently, so far as your own experience is concerned, or your own study, as to why the potato or tuber was excluded from the original Plant Act?

Mr. HOBBS. The only answer that I have ever been able to discover was what was made in the Senate committee report in 1930, that the Jerusalem artichoke and the Irish potato were substantially the only tubers that would be affected, and they reproduced by the same part of the plant that was sold as food.

Now, when you get a plant patent, you do not get a patent on the potato, the tuber, itself, or on the leaf or any other part. Your patent is on the whole plant as an entity. I think the Commissioner of Patents, who is here, will say I am right in that regard.

Mr. GREEN. Did I understand you to say that the sweet potato, properly, may be patented?

Mr. HOBBS. The sweet potato, I am told, and have read in several books and the Department of Agriculture so advised this committee, is not a tuber, but a fleshy root, and therefore not coming within the exception of tuber-propagated plants. The sweet potato can be patented, as could an onion, and each of those is reproduced by the same part that is sold as food.

Mr. GREEN. Do you have any questions?

Mr. WRIGHT. The only question I have would probably be answered by the Patent Office. I was wondering if any patents had actually been issued on sweet potatoes?

Mr. HOBBS. I made an investigation early this year, and I do not believe that there are any patents issued on the sweet potato, or on an

onion, and, of course, I can't say, and I don't suppose the Commissioner would feel authorized to say whether there are any applications pending on those plants because the communication to the Patent Office soliciting a patent is a confidential matter.

Senator HART. Thank you very much, Mr. Hobbs.

Mr. GREEN. Mr. Frederick J. Meyer.

Mr. HOBBS. Might we have one of the other witnesses come first, Mr. Mercker, please, to be followed by Mr. Picha, and lastly, Mr. Meyer?

Mr. GREEN. You want Mr. Meyer to be the last witness, Mr. Hobbs?

Mr. HOBBS. Yes, sir.

(The complete statement of Mr. Hobbs is as follows:)

STATEMENT OF M. K. HOBBS

Mr. Chairman and members of committee, my name is M. K. Hobbs. Presently I reside in Winter Park, Fla.

I am in semiretirement after the practice of patent and kindred law in Chicago and in Wisconsin for 35 years.

Subsequent to the enactment of the Plant Patent Act of 1930, I have represented several individual plant breeders in the Midwest, and one of the largest wholesale nurseries in the country. I mention this, not to claim any special qualifications, but rather to indicate a wholesome interest over the years in plant patents. I have prepared the specifications for several plant patents.

In a brief which was submitted to this committee, I summarized faithfully the legislative history of the Plant Patent Act. I have a copy of that brief for each member of the committee if he would care to have it for his personal use. Since that brief is part of the official file, it will much shorten the comments that otherwise I would have felt it expedient to make.

The Secretary of Agriculture in 1930 reported in answer to an official inquiry that the proposed Plant Patent Act "* * * would appear to be desirable and to lend far-reaching encouragement to agriculture and benefit to the general public".

The Senate committee report on the Plant Patent Act stated:

"The purpose of the bill is to afford agriculture, so far as practicable, the same opportunity to participate in the benefits of the patent system as has been given industry, and thus assist in placing agriculture on a basis of economic equality with industry."

It is of interest that on the Senate floor in April of 1930, Senator Copeland related the efforts of the Stark Nursery to protect its new Delicious apple. It was sold under bond that no purchaser of a Delicious tree would sell or give away any cutting thereof. There was no other way to protect this new tree from horticultural pirates.

In the House it was said by Mr. Cannon in support of the Plant Patent Act of 1930 that there is no greater benefactor to the human race than the man who produces a new fruit or vegetable.

This brings us to the specific purpose of the amendment proposed by S. 1447. The statutes permit the granting of plant patents for new and distinct varieties of asexually reproduced plants, except tuber-propagated plants. By this exception, the act failed to accomplish its complete objective; namely, in the words of the Senate committee report, "to remove discrimination between plant developers and industrial inventors."

Very shortly after the passage of the act, members of the bar, and plant breeders asked, why the exception? No one had a satisfactory answer. Robert Starr Allyn, of the New York bar, in 1934 wrote:

Just why tuber-propagated plants have been barred we have not been able to understand."

Col. Lawrence C. Kingsland of St. Louis, former Commissioner of Patents, and himself a farmer on a modest scale, wrote to a member of the committee on June 12, 1959, sending me a copy of his letter, in which he said:

"During my term as Commissioner of Patents, I was called upon to make several talks before groups interested in plant patents, and at that time reviewed the background for the section of the Patent Act covering this subject. Even then I was unable to find any reason for the exclusion of tuber-propagated plants.

It seems to me that there is no logic whatever in making the distinction between plants within the protection and tuber-propagated plants without the protection.

I feel that the inequity that has resulted to plant developers under the present law should be promptly corrected, and I look forward to the Congress passing the amendment to the act without undue delay."

The present Commissioner of Patents closes his informative letter to Senator O'Mahoney as follows:

"The Patent Office can offer no valid opposition to the proposal (S. 1447)."

In the Senate committee report on the 1930 act it was said:

"The term 'tuber' is used in its narrow horticultural sense as meaning a short, thickened portion of an underground branch. It does not cover, for instance, bulbs, corms, stolons, and rhizomes. Substantially, the only plants covered by the term 'tuber propagated' would be the Irish potato and the Jerusalem artichoke. This exception is made because this group alone, among asexually reproduced plants, is propagated by the same part of the plant that is sold as food."

There are two errors in this statement:

1. There are many important tuber-propagated plants in addition to the Jerusalem artichoke and the Irish potato, viz, the taro, cultivated in Southern States and sold in the markets as dasheen, the caladium, the canna, the tuber rose, and several members of the huge lily family.

2. The second error is that under the act as it exists, a patent may issue on a sweet-potato plant, which is not a tuber, and on the onion plant, which is a bulb. Each of these reproduces by the same part of the plant that is sold as food, though each also reproduces by seed.

In his letter to this committee, Commissioner of Patents Watson, called attention to the fact that patents are granted on foods and medicines. Illustrative of patents on food products are the patented shortenings, frozen confections, certain breads. On pharmaceuticals: Penicillin, aspirin, vitamin products.

Literally hundreds of patents have issued on food-bearing plants: Strawberry, peach plum, orange, pecan, grapefruit—almost any fruit one can name.

Let me give just an illustration: In Wisconsin it is cold by Armistice Day. Vegetables have been cropped, grain harvested, and deciduous trees have shed their leaves. And yet on Armistice Day in 1957, freshly picked strawberries were exhibited at a convention in Madison, grown by Mr. A. E. Lang, of Dodgeville. Every other variety of strawberry in that area was dead or dormant at that time. Mr. Lang secured Plant Patent No. 1745 in 1958 on his frost-resistant variety.

Strawberries are important, but how much more important it would be, if under the incentive of reward and protection a disease-free potato were discovered, or a double-yield potato, or a potato that would mature in half the usual time.

The observation that literally hundreds of patents have issued on fruit- or nut-bearing plants should be coupled with the statement from the Department of Agriculture, and I quote from its letter of March 12, to this committee:

"There is no evidence, however, that patenting of plants has increased the cost of food to the consumer."

One of the points made in the Senate committee report on the Plant Patent Act of 1930 was that plant breeding and research had heretofore largely been dependent on the Government. It has been particularly so with the potato and the Department of Agriculture has done a remarkable job. But it hasn't yet come up with the perfect potato. Under proper incentive, and at his own expense, and not the taxpayer's, one of the several potato breeders in the country may.

Several persons have inquired how a patent on a new potato plant could be protected; and the Department of Agriculture has raised that question in respect to the proposed amendment. This, of course, is not the concern of the Congress. No agency of the Government has any interest, right, or obligation to safeguard a patent once it has been granted. The problem is solely that of the patent owner, whether the patent be on a machine, composition of matter, or any plant.

The question has also been asked how one variety of potato may be distinguished from another. The Department of Agriculture is credited with the development of some 70 new varieties of potato since the first Plant Patent Act. These varieties obviously were identifiable as new by the Department.

Under the law, the Department of Agriculture is obligated to advise the Commissioner of Patents as to whether a plant upon which a patent is sought is new and distinct. This obligation would continue if the proposed amendment were adopted, for the bill makes no change in this regard. If a potato plant upon which a patent is sought is sufficiently new and distinct to warrant the granting of a patent, such new variety can be identified because of its new and distinct characteristics; and such new variety could be followed into the hands of an infringer.

Anyone can tell the rose of Plant Patent No. 1. It is the only ever-blooming, climbing rose. Even the untrained person can spot the strawberry of the Parish patent, for it is the only strawberry without a hollow center or a white core.

The question also has been asked: How will a patent on a potato plant work. The patentee himself will raise, or license others to raise, certified seed potatoes and nurseries or seed houses will sell them. This is the common practice in the fruit field.

The Senate committee report on the Plant Patent Act of 1930 gave at least seven reasons why that bill was in the public benefit. Each of these reasons is applicable to the proposed amendment to include the tuber-propagated plant among those patentable. In conclusion, permit me to summarize those reasons in seven short sentences:

1. The plant breeder has no adequate financial incentive; a new variety, once it has left his hands, may be reproduced unlimitedly by all.
2. Plant breeding and research is dependent on the Government, in large measure.
3. New varieties will be made promptly available, for there will be no reason to withhold them.
4. Plant development by private funds will be stimulated.
5. The food and forest supply of the Nation is becoming dependent on new varieties, citing the peach disease which threatened Georgia and the white-pine blister as illustrating the need of disease-resistant varieties.
6. Plant breeding is fundamentally connected with the Nation's food supply.
7. Plant patents mean better agricultural products that will give the public more actual value for its dollar.

Senator HART. All right, Mr. Mercker.

The statement of Mr. Mercker in full will be included in the record.

Senator HART. Would you care to hit a highlight, or would you prefer to read it?

STATEMENT OF AL MERCKER, EXECUTIVE SECRETARY, THE NATIONAL POTATO COUNCIL

Mr. MERCKER. Well, the highlights are that the Department of Agriculture did a lot of good work, and they have a lot of fine varieties, but in the past the big part of the work was accomplished by Rev. John Gilkey, and later by Chauncey E. Goodrich. We have never had people who had the zeal to do the work such as that which was generated by private industry.

Mind you, Mr. Chairman, in the 1840's we had to write letters in longhand, and we had only sailing ships to bring the original stock in from South America.

Later we had the new concept brought in that you did not have to propagate the potato from another potato, but that you could pollinate it. They depended on hand pollination in those days, and did a lot of good work, and not to this day do we have a variety of potato equal in eating quality to the Green Mountain and the Russet Burbank.

The inspirational zeal that we had spread over the country, where they had these hundreds of individual breeders, and as I mention in here, Albert Bresee with his Early Rose, which he developed in 1681, inspired all the folks in Western Europe, and in Europe, to get breeding potatoes, and largely from that variety they developed the leading varieties of today.

In my travels abroad, I was greatly impressed in Germany and Holland where they have the Patent Act to protect the breeder. In Germany, the breeder received 1 mark per acre from those who produced potatoes of his variety for table-stock purposes, and 4 marks per acre for those who bred potatoes for seed purposes, and we have

run into a family for the third generation breeding potatoes, and another one who had been breeding potatoes and grains for over a hundred years, and they are leaders. The same goes for Holland.

Now, we do not have in this country individuals outside of the Government who have extended breeding operations until lately. We have three potato breeders in the United States. Picha, of Grand Forks, N. Dak., Frederick J. Stevenson, of Madison, Wis., a retired Government employee, who had been in charge of the seed breeding for the Department of Agriculture, and Prof. E. L. Nixon, of State College, Pa., who lately has retired, and who is an uncle of the Vice President.

They are the only three that we have, and I would like to see many, many more so that we can get into this and breed more varieties, and get varieties that probably would be better adapted for specific purposes.

I am not too much afraid that the patentee can't protect his rights. There has been developed a new chemical material known as maleic hydrazide, which when sprayed on plants at the time of blooming actually precludes them from sprouting. This material has enabled potato processors to store their potatoes at high temperatures during the wintertime, so that they would be processed into a desirable processed product, such as frozen french fries of a lighter color than a mahogany color, and the same for potato chips, and it is effective.

The patentee could require in his contracts on reproduction that all table-stock potatoes be sprayed with this material. The cost is expensive, 6 to 10 cents a hundredweight to do that, but nevertheless it is effective.

If the Government is opposed to this bill, or the amendment of the bill, we need not be surprised, because they are opposed to the large majority of the agricultural bills.

I have been with the Government, myself, a long time. I have seen these potatoes degenerate. I admire the work that has been done, but I do think we should have some insurance in that the work is not done all in one place, or by one group of men out of Washington.

Senator HART. Thank you very much, Mr. Mercker.

May I ask for the record, and my own information, the nature of the council which you indicate you are associated with?

Mr. MERCKER. We largely represent growers, potato growers over the United States, and we hope that we represent the entire industry through all of the categories of the producer, the country shipper, the terminal-market handler, and now the many, many processors.

Senator HART. And this is a voluntary organization?

Mr. MERCKER. A voluntary association, who receives its finances from contributions directly or indirectly from growers. We do have a few shippers over the United States and processors who make a contribution.

Senator HART. Do you know whether or not the position you take this morning reflects the views of the members of the council?

Mr. MERCKER. Oh, I think to some extent, to a large extent; yes, sir.

Senator HART. You hold these views as an individual?

Mr. MERCKER. As an individual, very strongly, because after what I saw in Europe, I liked the method that they adopted over there in protecting those who interest themselves.

Senator HART. Did the council by letter or otherwise make a poll of its members to determine their attitude on this bill?

Mr. MERCKER. No, sir; I did not.

Mr. GREEN. Mr. Mercker, I will ask you the same question I asked the previous witness. Do you have any knowledge of the number of varieties of potatoes now being produced and marketed?

Mr. MERCKER. I would say a hundred or more.

Mr. GREEN. A hundred or more different varieties?

Mr. MERCKER. Yes, sir; of which the Katahdin is a leading one, probably accounting for 40 to 50 percent of the total production, and the Russet Burbank probably around 27 or 30 percent of the total production of the United States.

Mr. GREEN. Is that all in the Irish potato field?

Mr. MERCKER. Yes, sir; known as the Irish potato.

Mr. GREEN. What is your estimate of the last witness' statement to the effect that it would only open up, in addition to potatoes, as such, two other varieties of food which would be artichoke and taro?

Mr. MERCKER. There may be others. I am not too much of a lawyer or enough of a plant botanist to follow the family relations. I know of the taro. You and I, I believe, call it the elephant ear. It grows well under southern conditions. You can't tell it from a potato, if properly prepared, if prepared for mashed potatoes it makes a very fine white mashed potato, probably much finer than the grains in the Irish potato.

So far, I don't know of anybody in this country that has interested himself too much in the taro, or the dasheen.

Mr. GREEN. My question was if you knew of any other varieties of food plant or plants that would be opened up for a patent over and above the potato, itself?

Mr. MERCKER. I would have to say "No."

Mr. GREEN. Except those that have been mentioned?

Mr. MERCKER. That is right.

Mr. WRIGHT. Are there any other countries besides Germany and Holland that issue potato patents?

Mr. MERCKER. I haven't made enough study of that, though I was in about 11 countries.

Mr. WRIGHT. How about Ireland?

Mr. MERCKER. Now, of course, they do a lot of work in Great Britain, particularly in Scotland, and frankly I don't know enough about that. It was not called to my attention, and they do a lot of work in potatoes, not only the Government, but individuals.

Senator HART. There are a couple of Irishmen up here that reacted strongly to the response of the witness when he suggested that by describing the interest of Great Britain and it was necessarily inclusive of Ireland.

Thank you very much.

Mr. MERCKER. I thank you, sir.

(The complete statement of Mr. Mercker is as follows:)

STATEMENT OF A. E. MERCKER, EXECUTIVE DIRECTOR, NATIONAL POTATO COUNCIL

I am Albert E. Mercker, executive director of the National Potato Council, having been so engaged since November 1, 1956. Prior to that time I was employed for more than 36 years in the Fruit and Vegetable Division of the U.S. Department of Agriculture. In March 1929, I was assigned as marketing specialist for the white or Irish potato, and devoted my entire time to that problem.

The bill S. 1447 reads that the first paragraph of section 161, title 35 United States Code, is amended to read as follows:

"Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a plant found in an uncultivated state, may obtain a patent therefor, subject to the conditions and requirements of this title."

The National Potato Council supports this bill for the following reasons:

(1) To eliminate the discrimination toward this type of plant by the unavailability of patents which industry enjoys, and to make such availability possible;

(2) To make possible the development of a potato which will withstand all the ravages of disease, pests, heat, drought, and other adverse conditions;

(3) To encourage individuals to interest themselves in the breeding of high-quality potato varieties by giving the breeders patent protection.

The announced purpose of the Plants Patents Act was to give the same advantage of the patent laws to the developers of agricultural products that industry enjoys. As the act now stands, it fails in its complete objective in that tuber-propagated plants are not included. We recommend that tuber-propagated plants, such as the Irish potato, be covered in the act.

The U.S. Department of Agriculture has an excellent Division that provides for the plant breeding of potatoes. They have been working on this for the last 50 years, and have developed such excellent varieties as the Katahdin, Pontiac, Chippewa, Kennebec, Dazac, LaSoda, Delus, Pungo, Saco and others.

The potato industry and potato consumers throughout the entire world owe much to the individual plant breeder.

Potatoes were introduced into North America in 1718. Toward the end of the 18th century the varieties deteriorated. In 1811 Rev. John Gilkey, of Neshannock Creek, Mercer County, Pa., developed the Mercer variety. This variety was later known by nine different names. Mr. Gilkey developed other varieties which were good producers until the 1840's when the famous blight epidemics struck the potato crops, not only in the United States, but also in Europe. In 1843, a disease which broke out in Great Britain caused the immigration of many peoples from the British Isles, particularly Ireland, to the United States, to avoid starvation. This, with the blight epidemics in the United States, curtailed the crop and greatly increased prices.

About this time in 1843, the Rev. Chauncey E. Goodrich, a retired minister of Utica, N.Y., interested himself in the potato problem. He believed that the potato, as a result of long-continued asexual propagation had become weakened in vigor until it could no longer resist the attacks of diseases, pests, and other adverse conditions. He felt that it could only be rejuvenated through sexual reproduction, and devised a plan for the growing of seedling potatoes to develop more vigorous and productive varieties. Through our consular service he obtained varieties of potatoes from Central America. He knew nothing of hand pollination, and depended upon natural pollination to develop the potato seed. From this seed he produced the Rough Purple Chili, and from that its daughter, the Garnet Chili. He raised more than 16,000 seedlings of which he discarded all but about 10, and some of those he felt he should not have retained. Nearly every variety of potato produced in North America today can trace its parentage back to the Garnet Chili. Mr. Goodrich's leadership inspired numerous breeders in the United States.

Chemical companies, agricultural publications, and seed houses offered prizes for good new varieties, and substantial awards for high yields. In 1889, the Agriculturalist offered a reward of $500 in gold for the highest yield. This was won by Charles B. Coy, of Presque Isle, Maine, with a yield of 738 bushels of the Dakota Red variety. Seventeen growers reported crops of over 400 bushels. In 1890 the prize was won by William J. Sturges, of Buffalo, Wyo., with a yield of 974 bushels of the Rural New Yorker No. 2 variety.

The work of the Reverend Goodrich inspired about 20 persons to become breeders in Vermont, 1 of whom, Albert Bresee, of Hubbardton, Vt., bred the

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Early Rose in 1861—a granddaughter of the Rough Purple Chili. During the last half of the 19th century there were about 20 leading breeders in New York, one-half dozen each in Michigan, Maine, Iowa, some in Minnesota, New Jersey, Wisconsin, Pennsylvania, New Hampshire, Oregon, and Massachusetts.

One young man, Luther Burbank, of Lancaster, Mass., became interested, and, according to his own version, in the summer of 1872 he observed in a small plot of Early Rose potatoes in his mother's garden, one plant with a seed ball developing. On his next visit, the berry had gone, but after a diligent search he found it. He planted it the following spring and grew 23 seedlings, 1 of which was named Burbank's Seedling. It was a third generation from the Garnet Chili.

The enthusiasm in the United States spread over to Europe and stimulated the breeding of new varieties there, such as the Magnum Bonum, developed by Clark, of Christchurch, England; the Up-To-Date, by Findlay, of England; the Abundance, by Sutton, of England; and the Victoria, by Patterson, also of England. The varieties developed in England were from the Early Rose and traced their blood back to the Garnet Chili.

German breeders adopted the new principles of Goodrich and the work spread over the continent of Europe. There are few instances of record where a more zealously inspired person than the Reverend Goodrich mercilessly sacrificed his work for the good of mankind. He developed new varieties, and tested them from Canada to Oregon, to Virginia, without turning these efforts to his own profit. As Henry Ward Beecher said, "He was too busy with his experiments to have time to make money." After his death his books, which were closely kept, showed that with premiums, honorary gratuities, and sales, he had a balance to his credit of $50 after 20 years of unremitting industry. If anyone belongs in the Agricultural Hall of Fame, certainly this man does.

We have tried to illustrate how persons inspired by zeal to do good, such as the Reverend Gilkey and the Reverend Goodrich, bred varieties of potatoes whose offsprings have been among the top-ranking potatoes up to 20 years ago. The Green Mountain, Irish Cobbler, Russet Rural with its many synonyms, the Russet Burbank, Red Bliss, and Early Rose are all of high-quality fame. Yes; they have recently given ground to the newer varieties, but none are higher in quality than the Green Mountain and the Russet Burbank.

In these times expenses are so much greater than they were a century ago, and we are all busy making a living. However, there are many capable people being retired whose income in terms of purchasing power has dwindled. Why not encourage not only these folk, but many others, to breed potatoes by giving them some incentive? We have seen that the developing of a good potato depends upon some knowledge of genetics, but also we must recognize that the power of observation to select the higher quality seedlings is helpful, as well as, in some instances, a degree of luck.

In order to inspire more people to breed potatoes, it is necessary to provide some encouraging objective, such as possible remuneration through the application of patent laws, which would safeguard their developed products.

The adoption of this amendment would put the U.S. potato breeder on the same basis as the breeders in Germany, Holland, and other countries, which have provided for plant patents for potatoes. By this means the breeders supplement their incomes so that they are able to continue their breeding operations, with contracts for well-supervised reproduction of their seed and an adequate number of field inspectors. One German breeder told me that he employes as many as 250 field inspectors to rogue his own seed plots and to closely inspect the plots of potatoes produced by the multiplier grower. Some of these inspectors also supervise the harvesting, proper storage, and distribution of the seed potatoes to tablestock producers.

For these reasons, the National Potato Council strongly recommends that the Plants Patent Act be amended to provide all the benefits of the act to potato breeders.

Mr. GREEN. Dr. Ora Smith.

Senator HART. I should indicate the interest of the gentleman representing Senator Wiley, Mr. Gibbons, who is, of course, free to interject at any point, and if anyone cares to communicate with Senator Wiley, Mr. Gibbons, I am sure, will serve that purpose.

Again, sir, you have a statement. It looks short, and I suppose the quickest way to do it is just read it.

STATEMENT OF ORA SMITH, AGRICULTURAL CONSULTANT, NATIONAL POTATO CHIP INSTITUTE

Dr. SMITH. I am Ora Smith, professor of vegetable crops at Cornell University, Ithaca, N.Y., and director of research of the Potato Chip Institute International.

I have conducted research studies on the potato for the past 32 years, have published over 250 scientific papers relating to this crop, including the article on "Potatoes" in the Encyclopedia Brittanica. I have recently coauthored a book on "Potato Processing." I am not bragging, but I want you to have an idea of my background so perhaps you can judge whether I know what I am talking about.

It was established by Congress by the Townsend-Purnell Plant Patent Act of 1930 that the purpose of the act was to give to agriculture the same advantage of the patent laws as that enjoyed by the industry.

The act authorized the granting of patents for new and distinct varieties of asexually produced plants. By excepting patents on tuber-propagated plants from its coverage a large segment of agriculture and horticulture was excluded from the encouragement and protection of the act. Apparently this exclusion is without sound reasoning as I now hope to point out.

In the report of the Patent Committee, contained in the Senate Committee Report No. 315, 71st Congress, 2d session, April 2, 1930, and also in the House committee report, the chairman stated:

> This exception is made because this group alone among asexually reproduced plants is propagated by the same part of the plant that is sold as food.

This not only is discriminatory, but the statement is untrue. The following asexually reproduced plants, which are included under the present Patent Act, are propagated by the same part of the plant that is sold for food: sweet potato, garlic, shallot, horseradish, Egyptian or tree onion, and multiplier or potato onion. None of these plant species is classified botanically as a tuber but in all of them the reproductive portion is the edible part.

If there is the feeling that to grant a patent upon a potato would be against public policy and tend to permit someone to obtain a monopoly on the potato as a food product let me point out that this would be much easier to achieve with any or all of the above-mentioned foods than it would be with the white potato.

The white potato is grown commercially in every State of this country and is harvested every month of the year. Its acreage is several times that of the above-mentioned crops combined. There are 75 to 100 varieties of potatoes grown commercially in this country. It is quite inconceivable that the granting of patents on this crop would create anything approaching a monopoly on its supply.

To seek out and exclude tuber-reproducing plants from the advantages of the Plant Patent Act but to include plants propagated by bulbs, corms, stolons, and rhizomes is not understandable. This is particularly illogical when we consider that the white potato is a tuber and a tuber is the enlarged terminus of a stolon.

I am not sure when you go from one to the other, either. The tuber exception is entirely illogical and should be corrected.

I would like to support the bill to amend section 161, title 35, United States Code, which would include "tuber-propagated plants" in this protection.

Thank you.

Senator HART. Professor, that helped very much those of us who do not come with the background in this field.

Do you know whether the development of new and improved stock and variety in the sweetpotato family, where you have been able to patent it, whether they did or not, has been noticeably greater than in the unpatentable white-potato field?

Dr. SMITH. It would be very difficult to compare, because white-potato breeding could be accomplished in a much larger area than the sweetpotato because of its wide adaptability to climatic conditions, so that most of our sweetpotato breeding is done in the Southern States, and a large part of it, I know, has been done in Louisiana by Dr. J. C. Miller.

Now, I don't know that I would venture a guess as to whether or not it has been stimulated, or stifled in any way by not being—by being included under the original Patent Act.

Senator HART. Do you know of any food products which have not already been enumerated that would be patentable if the amendment is adopted?

Dr. SMITH. No; nothing in addition to those mentioned by the two previous speakers, and that included in this statement.

Senator HART. I think somewhat by implication you answered this when you stated you could not conceive of a monopoly developing, but from your experience and research, what effect upon the retail price of a white potato, price to the consumer, would you anticipate if the amendment is adopted?

Dr. SMITH. Of course, no definite answer to that either can be given, but I can conceive of the price of potatoes actually being lower to the consumer than they now are if a better variety than now exists were produced so that the grower could grow a greater volume per acre, a mealier or higher quality potato might very easily reduce the price of potatoes, as well as better suit the consumer for the purposes for which they want to use them.

Senator HART. I should warn you that I am on the Agricultural and Forestry Committee. You don't anticipate that they would be presented with a problem comparable to wheat if we should patent the potato?

Dr. SMITH. It would be just as likely we would create a surplus as we would to cause greater price to the consumer.

Senator HART. Thank you very much.

Mr. GREEN. Professor, one question for the record. Could you briefly explain the term "asexually"?

Dr. SMITH. Asexual reproduction refers to "a," meaning without, and sexual, you all know about. It means that the sex organs, namely, the pollen and the pistil, the ovary, and so on, are not involved as they are in seed production. They are not involved in "asexual reproduction." Sexual, you place the pollen on the stigma, that is sexual reproduction, and it is true seed, botanical seed as the result if all goes well.

With asexual reproduction, you can take a certain portion of the plant that has none of the parts that I have just mentioned, a stem, a root, or a tuber or a leaf, in some species or other practically any part of the plant may be taken, and when properly handled for moisture and humidity and temperature can be reproduced asexually.

Mr. GREEN. Is that difference by any chance one of the reasons for having them excepted from the provision of the Patent Act?

Dr. SMITH. I wouldn't think so, if the sweetpotato is included and the Irish potato is excluded. Notice I say "Irish" after knowing the content of the committee.

Senator HART. I was thinking of the chairman, in his absence.

Dr. SMITH. The sweetpotato is never produced sexually except by plant breeders that go through a tortuous series of methods of getting true seeds. It otherwise is reproduced asexually, in commerce.

Mr. GREEN. In that type of breeding, Professor, does the character or the variety of the plant maintain itself as it does in others, does it revert or come out different?

Dr. SMITH. Only with very rare exception in what we call a sport, a mutation, or a chimera, where a certain portion of the root, if it is a sweetpotato, or a portion of the tuber if it is an Irish potato, just one eye in an Irish potato, only under those conditions would you have anything except the same thing perpetuated as what you started with.

Mr. GREEN. So that there would be no trouble after a patent was granted of getting a different product from the same thing you patented?

Dr. SMITH. Getting a different product?

Mr. GREEN. Yes.

Dr. SMITH. Yes; there would be a lot of trouble. This is the rare exception I speak about, a sport or chimera, one in many thousands.

Mr. GREEN. Otherwise you would maintain the strain?

Dr. SMITH. Yes.

Senator HART. Thank you very much.

Mr. Ben Picha, Grand Forks, N. Dak.

STATEMENT OF BEN PICHA, POTATO SEED SPECIALIST AND AGRICULTURALIST

Mr. PICHA. Mr. Chairman, I am Ben Picha from Grand Forks, N. Dak. I am one of the very few private potato breeders in the country, and I have been engaged in hybridization and the development of new varieties of potatoes since 1943, and I have introduced as a name variety the "Redcoat," that was in 1953, and I make this statement to show that I have done potato-breeding work, and am engaged in hybridization, besides the production of seed potatoes, and the testing of new varieties.

I do not have a prepared statement, Mr. Chairman. However, I will make an oral statement as brief as possible.

The proposed amendment to the Plant Patent Act I feel would be an aid and offer an incentive to private potato breeders, and it would also perhaps furnish an incentive to the State and Federal breeders.

As the act now stands, potatoes not being patentable, I feel that it stifles free enterprise to the extent that it becomes very difficult for anyone engaged in private enterprise in developing new varieties to compete against new varieties offered for introduction by the experiment stations, or from the USDA.

The potato breeders——

Senator HART. If I may interrupt at a very unfortunate place here, in order to make a quorum at a meeting of the Select Committee on Water Resources on the next floor in this building, I must ask for a recess of about 5 minutes. I don't know what it proves to show your face and then leave, but it creates a quorum. I will be right back.

(Short recess.)

Senator HART. The committee will be in order.

Mr. PICHA. The next statement I was going to make is this, that it apparently would be an incentive for free enterprise along this line if at the present time perhaps the field may be considered as a monopoly which almost excludes private enterprise or private breeders, because of the difficulty which is imposed upon them from rewards for the work put in in the matter of development.

The Federal Government and State governments are doing a large amount of basic research work, which is all well and in good order, and a remarkably large amount of very fine work has been done, and I have often felt, and I do feel that the field of applied research upon which private enterprise could seize that would be possible to improve the results obtained from the basic research work by people who are engaged in actually the production and the development of potatoes for seed and as crops.

Thirdly, the matter of the granting of the amendment to include potatoes under the act is not against the public good. In fact, it would be for the public good, and as it is sometimes assumed, people may think, or would think that it would be possible to gain control, perhaps, of an important segment of the food supply of the Nation.

As such, this is practically impossible, because if anyone would gain control of a very good variety, and if prices would be held at an exorbitant level in trying to sell it, no one has to buy this new variety that might be introduced as a patented variety, because there are probably about some 70 to 100 other varieties which may be used by other potato growers, and there are probably 15 or 20 which are exceedingly good, and consequently the assumption is on a false premise to assume that anyone could gain control of the food supply.

The matter of enforcement of the act would probably be somewhat difficult, but why worry about that, because every individual, when he comes up against the problem, solves that problem for himself rather than preclude him from being able to do that himself.

There are difficulties, of course, in enforcement and probably would be, but be that as it may, those problems are also the same with the enforcement of any of the other plants that are patentable, so it is up to the individual to do that, himself.

At the present time, I think that this is about all that I can state, Mr. Chairman, for the proponents. I don't want to take up any more of your time.

Senator HART. Thank you very much.

Mr. GREEN. Mr. Picha, there is one question I would like to raise. If you can't answer, I would like anybody else in the audience who may have a notion with regard to it to perhaps add to it when they are testifying, and that is this:

Under the present bill, it provides for the patenting of a new variety of plants which, of course, would include the potato. Now, what is the situation with regard to potatoes as they exist at the present time? Is there any thought of attempting to gain patents on potatoes and

varieties of potatoes that are now being produced as opposed to newly developed varieties in the future?

Mr. PICHA. I think I did not get the import of the question, sir.

Mr. GREEN. Well, is there any thought of asking for patents on potatoes or varieties of potatoes which are now being produced and commercially sold, or does the bill only go to new varieties to be developed in the future?

Mr. PICHA. I do not know that I can answer that question for any others, what their thinking might be. My own thinking is the application would be for anything introduced as a new thing as of now, currently.

Mr. GREEN. As of the passage of the legislation.

Mr. PICHA. You mean if a variety had been named and has not been patented that then you would ask for an application for a patent; is that what you mean?

Mr. GREEN. No; as I understand it presently they have different varieties of potatoes, and I assume certain growers will believe their variety is better than somebody else's. Those have been on the market and are on the market, being sold. Those would not be subject to the patent; would they?

Mr. PICHA. I don't see how they could be, because of the fact that the only new variety form which has been introduced has been introduced by a private breeder—there probably are not over two or three. My Redcoat was introduced in 1953, and I think perhaps one or two others have been introduced since.

Mr. GREEN. That potato presently would be in the public domain, and would be almost impossible to patent; would it not?

Mr. PICHA. Well, I would not want to say particularly as to whether or not it would fall within the possibility of application. I had not thought of that.

Mr. GREEN. I think probably the question should be directed more to the people in the Patent Office. The thought had occurred to me and I thought I would discuss it at this point for whatever thought anybody might like to give it.

Mr. HOBBS. Mr. Green, if that question is troubling you, and I think it is very important, if it is not out of order I suggest that you ask the Commissioner that question. I think I can answer it, but I am certain not as well as Mr. Watson.

Senator HART. We will, thank you.

Thank you very much, Mr. Picha.

Mr. GREEN. Mr. Meyer.

STATEMENT OF FREDERICK J. MEYER, PRESIDENT, RED DOT FOODS, INC.

Mr. MEYER. Mr. Chairman, and members of the committee, friends, and associates, I do not have a prepared statement to leave with you, so my remarks will have to be for the record.

My name is Frederick J. Meyer. I reside in Madison, Wis. I am president of Red Dot Foods, Inc., which was incorporated in 1942 by what was an outgrowth of a company I started with my wife in 1931, while still a student at the University of Wisconsin.

That company is in the potato-chip industry, and from the chips which we made in the kettle back in 1931 to today, when last week

we processed over 22,000 bags of potatoes in our plants, I have seen the rise of the potato-chip industry. I am proud to have been a part of that rise, and I feel that we have only scratched the surface.

You mentioned the problem of surpluses. The potato-chip industry and the frozen french fries and processed potatoes are the only bright outlook to taking up the surplus of the potato. The use of potatoes has declined very substantially in fresh form by the housewife over the past few years. It seems that the modern housewife doesn't want to peel them, or process them as the housewife in the 1930's. She wants them in a ready prepared form, and now on the market you have potato flakes and dehydrated potatoes, and so forth.

From the U.S. Department of Agriculture, the volume of potatoes used for the manufacture of chips and shoestring potatoes from the 1957 crop was placed at 17,356,000 hundredweight, about 7 percent of the total production. That is a phenomenal growth over the amount of the crop used back in the thirties.

Red Dot Foods now grows approximately 25 percent of the potatoes which we use for processing. Back in about 8 or 9 years ago I realized that the only improvement to the quality of the potato chip would have to come from the potato. We only have three ingredients, potatoes, vegetable shortening, and salt.

When this act was passed, the Plant Patent Act, most of the potatoes were used, peeled, and cooked by the housewife, and the same potato that is used in the kitchen does not always make the best potato chip. One of the problems of our industry is a standard of quality.

I am sure if you are all customers who eat potato chips, regardless of whose brand, that there is nothing that makes you more embarrassed than to get a package, open it up, and have company and find out that the quality is bad. As manufacturers, that can't be completely—that problem can't be completely handled by improved machinery or improved processes, we must go back to the raw material and get a potato which is grown specifically for chipping and processing.

I think the same is true for the dehydration of potatoes, for the making of potato flakes, potato flour, and frozen french fries, but in my speaking today I will speak purely from the potato-chip angle as a processed food from potatoes.

I served 8 years on the Advisory Committee for Potatoes for the U.S. Department of Agriculture. I was rotated off last year. They were 8 enjoyable years. Half of the meetings that I attended I attended at my own expense, the other half at the per diem.

During that time, I visited practically every potato-growing area of the United States.

In 1949, I was president of the National Potato Chip Institute, which today is the International Potato Chip Institute, of which Dr. Ora Smith is research director, and I was greatly honored 2 years ago when the association granted me a life membership for the contribution to the potato industry, an honor which usually goes to a scientist rather than to an entrepreneur.

I strongly believe in the free-enterprise system. I should. We have over 1,500 employees in our company today, and if you take the average of 4 people to a family, there are 6,000 people who are deriving their living in this free country as a result of a $15 investment back in 1930.

I had the opportunity of being in Russia 2 years and 9 months ago in September, and through Dr. Stevenson, the head of our potato research department of our own company, through letters which he wrote, because he had corresponded with people in Russia before the war, and he was formerly with the U.S. Department of Agriculture, I was able to get an appointment in Moscow and spent a day at the Russian Research Center on potatoes.

Gentlemen, I have been through Beltsville, and with all due respect to the people from Beltsville here, I was taken through laboratories every bit as good as we have. There were 10,000 scientists working on potatoes.

Senator HART. What was that figure again?

Mr. MEYER. I was told there were over 10,000 scientists working on potatoes, and I believe it from the size of the laboratories and the farms, the plots which they took me through. They furnished me an interpreter. The head director of that institute provided me with a book in Russian, which in fact I turned over to Roy McGruder, of our U.S. Department of Agriculture upon my return, so that they could translate it and see if it had anything of value. I was not a scientists and was not capable of answering the questions they asked about what we were doing. I did have some of our house organs and showed them what the free-enterprise system could do, and they let me out without holding me.

Senator HART. Let me interrupt there, and it is off the track. Do you think the free-enterprise system is doing enough in the light of what you just described the state Socialist system in Russia is doing?

Mr. MEYER. No, I do not think we are, because we are hampered, we have no reward, and I am coming to that.

In the last war, I did graduate from the university in chemistry, but only with a bachelor's degree, and in 1931 I couldn't get a job for $75 a month, so I stayed in the potato-chip business, and that is not much of a scientific background, but it was enough to when the war came and the Government wanted plants converted to potato dehydration, I sat in Mr. Mercker's office and immediately spent a year dehydrating potatoes in Duluth, Minn., and sometimes I hate to face the boys that had to eat those, and admit that I had any part of producing them.

If we are going to be prepared for an emergency food, we need every bit of research we can get, whether it be from Government, from State university, or private enterprise, to be ready with the right type of potatoes.

Now, to go back, about 7 or 8 years ago I brought a young fellow into our organization, and we had a research grant to the University of Wisconsin, and one of the professors there, a plant breeder, Dr. Reeman, suggested this young fellow be given an opportunity to get his doctor's degree.

He was a GI, he had two children, and he suggested I put him on our payroll for the summer, and I did. Today he is vice president of our company, has his doctor's degree in genetics, and through his influence, after he got his doctor's degree, we started a research program for the breeding of potatoes.

Our annual budget now is $60,000 a year. This is in our seventh to eighth year, so we have invested over a half a million dollars already in the breeding of potatoes.

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I think that Mr. Mercker brought out that there are only three in the United States, Mr. Nixon, Mr. Picha, and Red Dot Foods, of which I am the president.

We now are propagating on a 960-acre farm in northern Wisconsin 25,000 potential new varieties every year, and increasing them. We have built a greenhouse. We have established two fellowships for students to get their doctorate degrees in genetics, but we are faced with no protection whatsoever with what we produce.

Now, you asked the question as to whether we thought if this inequity were taken out of the bill it would increase the food supply, or the cost of the potato. I am afraid that too many of us think of the potato as being used as our mothers used it, by peeling and boiling or baking. I think we overlook the fact that the freight that we pay for our potatoes from Alabama to Madison exceeds the cost that the farmer gets in Alabama in the spring of the year, and in Florida considerably more, and still potatoes are grown in every State of the Union.

One of the points that we have directed our research toward is developing a variety which will mature earlier in the Central States to cut down that freight cost. Today we are buying from Virginia. A week from Friday, on our own farms, we will start to dig some potatoes which are probably a week earlier than any that have been grown in Wisconsin. The difference in freight on that 22,000 bags, if we are lucky enough to fry as many as we did the week before the Fourth of July, will be approximately $1 per hundred, or a $22,000 saving. That will be passed on to the housewife.

I should be more familiar with the price of potato chips in Washington, but it is not a market in which we operate. We are limited to about 125 or 150 miles radius of where we can ship from a plant, which means that we have to have a plant in every major city where we operate, and we cover 12 States. We now have 12 plants, and on the 8th of July bought the only potato-chip plant in the 49th State of Alaska.

The price of potato chips will be brought down if we can get some protection. As it is now, we have tried to open up our research farm and bring in competitors. We have had many of the men in the room of the USDA who have been up there and seen the work we have done. We want to exchange material, but we want some protection, if it be no more than the credit for developing.

As it now exists, we can't even name a variety, and if we did name it and used it in our advertising, a competitor could pick it up.

To go back to the dehydration days, I don't think there is another food, and once again I am not a scientist and somebody may clip me for this one later, but I don't think there is another food that yields as much food per acre as the potato. Sure we have got some surpluses today, but at the rate of our population increases, we are not going to have those surpluses in the years to come, and a year ago last February and March, I made a tour of the Orient, through India, and there are many, many people in the world that could stand more food, so we have these surpluses, on the one hand, and these hungry people, on the other, but someday or other the world is getting shorter, and the fact of the matter is I left my farm in northern Wisconsin at 7 last night. I couldn't do that a few years ago and be here.

Someway or other this is going to equalize, and we need every bit of research that we can get, that private enterprise can give as well as that you can get through the Government agencies, or the State universities.

We have grants with the universities. I don't think that in anyway we would stop those grants. We work very closely with the University of Wisconsin. We just brought a student there from Michigan who got his bachelor's and is going to get his doctorate purely because he is working summers on our research farm, and we hope when he is through he will be free to go any place he wants to go, but if he is a good man we hope he will stay with us.

I think we are too shortsighted when we say that taking out this inequity would raise the cost of the potato. It might raise the cost of the potato if the potato were used as it was in the 1930's, but in my opinion this exception is as outdated today as a model T Ford.

You check at home and see how many pounds of potatoes your housewives buy as potatoes, and how many they buy as frozen french fries and potato chips. Every time the housewife buys a pound of potato chips, she is buying 4 pounds of potatoes, because we have taken the water out. When you ship a carload of potatoes, you pay the freight on 80 percent water.

In our research we are looking for varieties that have higher specific gravity, that will yield more food value, more solid, not just increase the yield per acre to pay more freight on water.

I heard the opposition—I shouldn't say I have heard the opposition, but I have discussed this with certain individuals in the Department of Agriculture, and I don't think that it is the duty of a public servant to worry about how a bill is going to be enforced. I don't think that it is the duty of a public servant to try and uphold the monopoly within the Government agency. This is what Russia has got, and that is what I am here trying to fight to break.

I think that either the whole Plant Patent Act should be repealed, or the inequity should be taken out as far as potatoes are concerned.

We have Government agencies breaking up monopolies, they are investigating the food field. When we make an acquisition of a potato-chip plant in a city, we have to be careful that we are not buying a plant which will give us over 50 percent of the business in that city, or we are immediately in trouble.

We have three independent plant breeders in this country. We ought to have 50.

I went to Alaska because I am interested in pioneering. I flew up there, and I was there 3 hours and bought the only potato-chip plant there. Three days later I had a meeting with the mayor and the chamber of commerce, Mr. Campbell, who is with the U.S. Department of Agriculture, and I find that the largest cash crop of the State of Alaska is the potato. They grew 1,200 acres last year in the Matanuska Valley.

We grow more than 1,200 acres on our own farms in Sugar Camp Township in Oneida County in the State of Wisconsin.

We flew up by air 500 pounds of new seedlings and worked with the U.S. Department of Agriculture in planting these seedlings to see if we could not find a variety which is more adaptable to the agriculture of the Matanuska Valley. I am flying up Dr. Webber, our vice president, in August. I have talked to the land department and we hope

to develop farming of potatoes in the Matanuska Valley ourselves to help bring out a better variety more adaptable to those conditions, and also one which we can grow there and manufacture potato chips in Anchorage.

I was buying potatoes in California at $2.50, paying $2 freight to Seattle, and $2.40 bulk freight to Anchorage, so that the people in Anchorage pay 15 cents per package for the package of chips we sell for 10 cents. They pay 89 cents for the package of chips which we sell down here for 49.

If we can develop a variety that can be grown and stored up there, they can have the benefit of the same prices for potato chips which we have.

If you will pick up the food ads of the Chicago market as of the Fourth of July, or Memorial Day, you will see full pounds of potato chips advertised for 49 cents, and the regular price is 59 cents.

I think if you go from Atlanta south you will find about the largest package is 10 ounces for 59 cents. This was as of this last Fourth of July.

If these varieties can be found which will grow, and they do grow potatoes in all parts of the States, the price of potato chips can be brought down. The price of frozen french fries can be brought down. The price of the processed products of potatoes can be brought down and save the housewife dollars.

Now, let's look at the farmer's angle. We like to contract for potatoes with a farmer and will pay a premium if he will grow the type of potato which will make a good chip, but he has to use cultural practices we develop in order to keep the water content low.

I would rather pay a farmer $2 a hundred for potatoes that had 25 percent water than I would $1.50 for those with water content. That is why in the Red River Valley and other parts of the country the farmers associations are working with the chippers to find out how to store and how to grow.

The other chip companies would jump into this research, too, if they had protection. I am sure they would, because they would be forced to, but we have reached the point where we have to seclude our plots back in the woods, be careful we don't have somebody come in and steal a potato. We are practically forced when they ask us if that is a good one to say "No" if it is, or "Yes" if it isn't, hoping if they steal one they steal the wrong one.

One mark per acre in Germany is only 25 cents an acre. We are not talking about raising the cost because we want this inequity taken out, we are talking about something that is very important to preserve that which made America great, the free-enterprise system.

Thank you.

Senator HART. That was a very peppery statement, and I think portions of it could well have been relevant to the Committee on Foreign Relations, and certainly I recognize some of it applicable to bills being considered in the Committee on Agriculture.

Mr. MEYER. I bought a half interest in the only potato-chip company in Frankfort, Germany, because the young fellow who started it needs some help. We are shipping him machinery.

We had a boy from Delhi, India, who graduated from the University of Wisconsin, got his master's degree, spent a year training in our plant. His name is Singh Pasraj. He was a Sikh, he wore his turban, his bangle, and his beard. His father is head of a sugar mill over there, and we have a contract with them. He is over there surveying Delhi and Bombay, and we are going to ship him some machinery. We are going to lose money, but maybe we are going to help the free-enterprise system directly from industry to people to let them know what it means to create things and watch them grow rather than to hand them food.

I have been lucky in the last few years to have had the opportunity of traveling, and I think that if we lose the Far East, we have lost more than we can ever regain.

Senator HART. With your latter statement, I agree completely, and in fairness I should add that I have not heard any of the discussion with reference to enforcibility, but I anticipate from what I have heard thus far that we will.

I would defend as proper an expression of concern by a public official if he felt that a proposal was unenforcible, because I think one lesson in history is that great damage is done to a nation if they undertake to put on the books things which are unenforcible. I don't think we can contribute to any system, free or controlled enterprise, if we advocate things without considering their enforceability.

I don't know who is going to make the argument, but I would give assurance in advance that I recognize this is a factor in the consideration of any proposal for legislation.

Mr. MEYER. I agree completely, but this exception shouldn't exist. There are other plants and plant foods covered by the Plant Patent Act which are just as hard to enforce.

Senator HART. This I wouldn't debate.

Mr. MEYER. Either the whole act should be repealed, or the section should be removed.

If your wife goes over and cuts a slip from a rose bush of a neighbor which is patented, in effect I suppose that she has broken the law, but who cares? My whole thesis is that the exception is unfair to private enterprise for those people who happen to be in the processed foods division of the potato.

Senator HART. I understand your point.

Mr. MEYER. And if there are problems in enforcing it, then in my opinion the exception should be removed and the whole Plant Patent Act be investigated as to how it can be rewritten for better enforcement, or to make it more equitable.

My only point, and I agree with you 100 percent in what you said, my only point is that the exception came in there because at that time there was not any processed potato product sold, and nobody was interested in it. I am not disagreeing with you, it is only the exception I disagree with.

Mr. GREEN. Mr. Meyer, is it not true that in the granting of any patent it is up to the patent holder to enforce his own rights?

Mr. MEYER. That is correct.

Mr. GREEN. There is no governmental responsibility in that respect; is there?

Mr. MEYER. That is correct, and I think speaking for my own company we would be happy to assume that responsibility.

Mr. GREEN. It would be your loss if you didn't?

Mr. MEYER. But look at it this way. Supposing we do develop a variety which we think we can do over a period of time that will produce, in my particular case, a potato chip of better quality, at least we can advertise this is produced from, we will say, Osaka—I wouldn't use that, that is too Japanese, but take any name, X potatoes. At least in your advertising campaign, your competitor could not say these were produced from those unless he could show you where the source of the seed came from.

Mr. GREEN. Thank you.

Mr. WRIGHT. I may have misunderstood your testimony, but I thought you said that as of now you could not protect a name that you might give a new variety; is that correct?

Mr. MEYER. I could copyright it, I suppose.

Mr. WRIGHT. You could protect it as a trademark, too. There is no reason why you can't get trademark protection.

Mr. MEYER. On the name of a variety of potato, I don't think I can. I would have to ask Mr. Hobbs. I can get a trademark protection on the brand of my product.

Mr. WRIGHT. On the brand of potato you could not?

Mr. MEYER. I think a person could trademark a whole variety of potatoes, Red River Reds could be trademarked. I might be off base, but I think that is trademarked by the Red River Valley Potato Growers Association, but it could cover Red Pontiacs, or several varieties of red potatoes, and still under one trademark. The trademark in my opinion becomes a marketing device.

If a producer patents a new process, we have to pay royalty. If he patents a new machine, we pay royalty, so that in this case, if we devoted research to improved machinery or improved processes—in Wisconsin we developed a machine that will separate the stones from the potatoes after they are dug, by water pressure, and we have a patent application in for that, and are going to license—if it is granted—other machinery manufacturers to do it.

Now, the money we spent in that research, and we dug in some fields as many stones as potatoes the first year we harvested potatoes, but in the years we have taken the stones out of the land. In past years we left the stone on the land.

That money we spend for research, we get some protection, but what we spend on plant breeding we have no protection on.

Mr. WRIGHT. As far as marketing protection is concerned, you do have the same opportunities for trademark protection, I suppose, as anyone else.

Mr. MEYER. As far as the brand of our product is concerned, but I will have to plead ignorance as to whether we can trademark a variety of potato and have protection on that. If we can, I am not familiar with it. I would have to ask somebody. I am not a lawyer.

Senator HART. Thank you very much, Mr. Meyer.

Mr. MERCKER. The question was asked as to whether or not I polled the members of our organization. We have 13,500 on an active mailing list, to which we send the news. I did not poll that membership, but I did send a copy of the amendment together with a statement as to my stand on the amendment, and that I would testify for the amendment, to all my directors and officers which are 105, to all of the active potato improvement associations in the United States and Alaska, which is about 125, and to about 90 production credit associations in those counties that are heavy in potato production. I told them of my stand, and I received no objections.

Senator HART. Thank you.

Mr. MERCKER. I did not poll the entire mailing list that we have. We have 30,000.

Senator HART. Yes; I should explain that the reason—it was I who asked the question—in the last sentence of your prepared statement. I noticed you say that for these reasons the National Potato Council strongly recommends the amendment, and I was just curious as to how inclusive that was based on your discussion.

Mr. GREEN. Mr. Maclay.

STATEMENT OF W. D. MACLAY, ASSISTANT ADMINISTRATOR, AGRICULTURAL RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. MACLAY. Mr. Chairman and members of the committee, I am W. D. Maclay, Assistant Administrator of the Agricultural Research Service of the Department, and also serve as Chairman of the Department's Committee on Patent Policy.

I have a short statement here I would like to read to amplify the statement sent to you by the Secretary stating the Department's position on this bill.

Mr. Chairman and members of the committee, we are glad to have the opportunity to appear before you to discuss S. 1447, a bill to amend section 161, title 35, United States Code, with respect to patents for plants.

My associates are Dr. F. P. Cullinan, Associate Director of the Crops Research Division and member of the Department's Committee on Patent Policy, and Mr. T. A. Seegrist, Office of the General Counsel and a member of the Committee on Patent Policy.

Mr. Chairman, you have received the letter from the Secretary stating the Department's position on the bill.

Senator HART. At this point I think it would be appropriate to introduce in the record the letter dated July 6 to which the Doctor has just made reference. It was signed by True D. Morse, Acting Secretary.

DEPARTMENT OF AGRICULTURE,
Washington, D.C., July 6, 1959.

Hon. JAMES O. EASTLAND,
Chairman, Committee on the Judiciary,
U.S. Senate.

DEAR SENATOR EASTLAND: This is in reply to your request of March 31, 1959, for a report on S. 1447, a bill to amend section 161, title 35, United States Code, with respect to patents for plants.

This Department opposes the enactment of S. 1447.

The bill would eliminate the present exclusion of tuber-propagated plants from section 161, title 35, United States Code, with respect to patents for plants.

Our reasons for making the above recommendations are as follows:

(1) The Department has been conducting a national potato-breeding program for the past 30 years. The success of this program is attributed in great measure to the free flow and exchange of germ plasm, breeding lines, and varieties with State and private breeders. We believe the proposed amendment would have the effect of reducing exchange of breeding materials.

(2) The amendment also would limit the possibilities of widespread testing of breeding lines before release of a variety. The likelihood of escapes being patented is real.

(3) The law would be difficult to enforce since the portion of the plant patented (the tuber) would be marketed and it would be difficult to prevent purchasers of tubers on the market from propagating them for field or garden use.

(4) New arrangements and procedures for seed certification of patented varieties would need to be worked on.

(5) The law as amended would permit patenting of sweet potatoes and other root crops used as food. The difficulties of maintaining public supported programs with root crops would be similar to those for tuber-propagated plants.

(6) Under present procedures this Department is called upon by the Patent Office for assistance in determining the newness of a variety. This has already proved burdensome of the time of research personnel. Submission of purportedly new tuberous root crops and plants offered for patent under S. 1447 would require additional services of research personnel, thus decreasing the resources of this Department for productive research toward solution of the many technical problems of agriculture.

The Bureau of the Budget advises that there is no objection to the submission of this report.

Sincerely yours,

TRUE D. MORSE, *Acting Secretary.*

Mr. MACLAY. I should like to elaborate on the reasons why the Department does not favor this bill.

The bill amends the present law to provide that whoever invents or discovers and asexually reproduces any distinct and new variety of plant, and newly found seedlings other than a plant found in an uncultivated state may obtain a patent therefor.

The present law excludes "tuber-propagated plants." Among the important food plants that are tuber propagated within the meaning of the present law are potatoes, and, according to our understanding of the Patent Office's practices, sweetpotatoes, and possibly other plants such as the drug plant *Dioscorea.* In the case of the potato and sweetpotato the part of the plant that is asexually propagated is also the part used as food.

The Department has an extensive research program in cooperation with the States and private breeders in the development of new disease-resistant and otherwise improved varieties. In this program, breeding lines of potatoes and sweetpotatoes that show considerable promise are sent to many locations for testing and evaluation. At harvest time, research personnel, seed producers, and farmers often inspect and pass preliminary judgments on the suitability of the selected seedlings as commercial types. When a new seedling is considered worthy of naming and introducing as a new variety, an official notice of release signed by the Department and the cooperators is issued. Seed producers or nurserymen are then notified and they are free to grow or propagate these new varieties for sale to the public. The success of this program in new varieties released is, we think, due in no small measure to the free flow of materials, germ plasm, and ideas.

Should the plant patent law be amended to permit patenting of potatoes and sweetpotatoes, it is inevitable that progress in the development of new varieties would be retarded. Restrictions on distribution would necessarily be imposed in order to protect the public interest and rights in plant materials under test. Without expensive and impracticable safeguards superior patentable seedlings might well escape from Federal or State plantings and without authority be patented by others.

The Department is at present bringing in from other countries new germ plasm in foreign varieties and the wild relatives of many

of our crop plants. These new plants serve as sources of insect or disease resistance, hardiness, or other valuable characteristics for breeding and improvement of our present-day varieties. Some of these new plants are tuber propagated. A few after growing here under cultivation are introduced directly as crop plants or ornamentals and are made available to nurserymen. One of these promising plants is *Dioscorea.* Today this plant is the most important source of the drug cortisone and related drugs of the steroid type. Under the bill, as proposed, this plant could be patented.

This Department does not grow and sell seed or other propagating material to seed producers or growers. Foundation stocks of potatoes, sweetpotatoes, and seed-propagated species are furnished without charge to all bona fide seed producers who desire them. A substantial part of the seed producer's business in this country consists of varieties developed by this Department and other public agencies.

Private breeders of potatoes and seed-propagated crops in America are now able to capitalize on their breeding work without any patent protection. They obtain prestige value from their introductions, from repeat orders for these introductions, and the large volume of business that is brought to them by their standing as breeders and as producers of high-quality products.

These breeders make use of the Department's introductions of new varieties which are available to all on an equal basis. The Department has had no criticism of its present program from any of these breeders. We believe that this cooperation has been in the best interest of American agriculture. We will be glad to respond to any questions that come within our field that the committee may wish to ask.

Senator HART. Doctor, I think you mentioned it, but I do not recall your answer. This point of view which was adopted and approved by the Secretary was developed by a committee composed of whom?

Mr. MACLAY. The Department has a Committee on Patent Policy which consists of roughly 10 members, each of the principal organizations in the Department being represented, such as the Agricultural Research Service, the Marketing Service, the Forestry Service, Soil Conservation, and the Office of the General Counsel, and all matters pertaining to patents that come to the attention or the concern of the Department are referred to this Patent Committee, and individually the proposals are studied, and collectively then we make our recommendations to the Office of the Secretary.

Senator HART. I don't intend by this question to do violence to this debated area of executive privilege, but if you are free to advise, was there disagreement in this recommendation among the 10 members?

Mr. MACLAY. No; none whatsoever.

Senator HART. Thank you.

Mr. GREEN. Mr. Maclay, speaking of the cortisone, do you have reference to what is known as the barbasco root?

Mr. MACLAY. I know it only as *Dioscorea,* in which the Department has a large screening program, and also an agronomic program, development of kind and species, as a source of cortisone. I would have to refer that to Dr. Cullinan from the technical standpoint.

Mr. GREEN. One other question. There has been some testimony here that under the present plant patent law that there is a differentia-

tion between a sweet potato and the other type of potato, and that the sweetpotato could be patented due to the fact that it has been characterized as not a tuber.

Mr. MACLAY. Again I am not a chemist by profession, and I would refer that to Dr. Cullinan, if he might join me up here.

Senator HART. It might make for a more meaningful record.

Dr. CULLINAN. I think there have been some questions raised this morning that it would be helpful if we could have clarification from the Patent Office, because we are guided by their definition.

On the questions concerning what is eligible for patenting, we should leave those questions to the Patent Office, because they are qualified to answer on that.

Mr. GREEN. Well, on that question, sir, is it not the Department of Agriculture that determines whether a plant is a tuber?

Dr. CULLINAN. That determination is made by the Patent Office. We make a recommendation. As you know, the plant patents that are applied for are referred to us by the Patent Office for our opinion as to their newness. They make the determination as to whether it comes within the law. We make a recommendation to them on the newness of the particular variety for which patent application has been made.

Mr. GREEN. But if a determination has to be made as to what is a tuber and what is not a tuber, who makes that determination?

Dr. CULLINAN. That would be a matter of law. It has been my understanding that there has not been a patent granted on a sweet potato. We would simply point out, and I think the background of determination there which again can be brought out by the Patent Patent Office is whether or not the basis for determination in the past has been the intent of the committee, as indicated in the first bill, that it would not apply to a food if the part that was propagated was a food.

Mr. GREEN. I understand, and you can correct me, you differ in the opinion that the sweet potato under the present law can be patented, because it is a food.

Dr. CULLINAN. It would still depend upon the determination by the Patent Office.

Mr. GREEN. Now another question, and then you may make your own statement, the question as to the cortisone. Is that the barbasco root that we have heard talked about, that grew out in California?

Dr. CULLINAN. There are a number of those. The *Dioscorea* is a special group of plants that has been found. This group has been found to contain this steroid chemical, and it seems to be the most promising as a source of cortisone.

We have been working on that plant, the agronomic development of it, and have developed some varieties that are high in this steroid chemical.

Mr. GREEN. And it is your feeling that passage of this amendment will open up the possible patenting of that type of plant, too?

Dr. CULLINAN. Yes; I think it would.

Mr. GREEN. Do you have a statement?

Dr. CULLINAN. No; I have no further comments to make, unless there are some questions.

I would like to make this statement, Mr. Chairman, and that is in the review of these plant patents we have worked very closely with

the Patent Office, and Mr. Goldberg is our contact in the Patent Office. We have excellent cooperation with them on a review of the patents that are eligible, that are considered eligible at the present time. Our purpose is simply to give our opinion as to the newness of a variety. The interpretation of the law and whether a patent can be granted is entirely within the province of the Department of Commerce.

Senator HART. I wish I didn't have to display so publicly my ignorance as I am afraid this question will.

Does the Department itself make any applications for patents on things which it develops?

Dr. CULLINAN. No; the Department does not make any application on agricultural, new varieties, or on seeds. It does take out public service patents on new discoveries that might be made in the chemical laboratory, or for a new invention, a new piece of machinery or equipment, but it is a public service patent, particularly where the work carried on is done by a man who is already employed as a Federal employee, and the work is in his line of duty or job description.

Mr. GREEN. That is true even though it can be patented?

Dr. CULLINAN. That is true even though it could be patented. Whether or not the Department might find it necessary to take out public service patents in protecting its own discoveries is a determination that would have to be made.

Senator HART. I wonder if either of you, or Mr. Seegrist, could give the committee any estimate, based on what you have heard this morning by the proponents and your past experience, of the additional cost to the Department, if any, that would result if the law was amended as proposed here.

Of course my question, I suppose, goes to whether you would anticipate much volume in applications, and how much time it would take, the additional personnel that would be required, and so on.

Dr. CULLINAN. It would take additional personnel. At the present time, our review of plant patents is made by specialists. They are research people employed on research funds. We have no separate group set up to review plant patents.

Up to now it hasn't been too burdensome. It has taken considerable time, and it is something that we would have to give consideration to, and in fact we are already raising the question with the Patent Office as to whether they or we should not take on additional personnel to handle these patent applications.

Senator HART. When you speak of these patent applications, you mean the applications pending or made under the present law?

Dr. CULLINAN. That is right, and I feel sure that if we went into the study of these new varieties for which patent application is made, we should conduct more research than we are at the present time, because it would be necessary to grow many of these plants. They can only be identified in some cases by the color of the stems, or by the flowers, and they could not be identified entirely by the fruit or the tuber of the plant. Some of them could, but not all.

If you were to make a careful analysis of it, it would take considerably more research than we are doing at the present time.

Senator HART. Maybe this is repetitious, but do you feel that there are factors which would make patenting of potatoes less desirable than the patenting of other plant varieties?

Dr. CULLINAN. No, I don't think so, Mr. Chairman. I think the purpose of the statement of the Department was to point out to the committee some of the problems that might arise and come about if the act was amended as has been proposed.

It is not an opposition to potatoes, as I see it, per se, but to point out what problems would be created by the act, considering all vegetatively propagated plants that might conceivably come in under the act.

Senator HART. Thank you very much.

Mr. Seegrist, did you have something you would care to add?

Mr. SEEGRIST. No; I have no statement.

Mr. GREEN. I have one further question to address to any one of the three of you who cares to answer.

In the Department's letter there is the statement:

> The likelihood of escapes being patented is real.

Would you comment on that?

Dr. CULLINAN. That was very well brought out by Mr. Meyer in his testimony; that is, the possibility that a potato might be picked up casually or intentionally, we might say, the possibility that a potato that either a private breeder or we might decide was not quite good enought to be introduced could be taken and propagated, and application could be made for a patent, which presumably would be granted.

Mr. GREEN. Does that not occur at the present time?

Dr. CULLINAN. There is no incentive at the present time. There is a free exchange of material.

Mr. GREEN. I am speaking now of plants that can be patented at the present time. Does not that situation occur among those?

Dr. CULLINAN. It could, if it could not be detected, if it couldn't be found. We in the Patent Office have to try to determine whether or not the variety is new.

Mr. GREEN. One other question relating to enforcement. It is stated the law would be difficult to enforce since the portion of the patented tuber would be marketed, and it would be difficult to prevent purchasers of the tubers on the market from propagating them. Would you explain that?

Dr. CULLINAN. I think that again, as pointed out here, enforcement would not be a responsibility of the Department. It is a safeguard that should be taken, since the tuber is the portion that is propagated, and it is also the portion that is sold as food, if it is sold in stores some measure would have to be taken to protect you or I, if we should go and buy those tubers and plant them, would we be guilty of infringement, and could it be enforced. That has simply been pointed out in the letter as one of the problems that would need attention.

Mr. GREEN. What I was referring to was to clarify my own thinking, is that not true also of plants which presently may be patented?

Dr. CULLINAN. Yes; it is.

Mr. GREEN. So you do have the problem——

Dr. CULLINAN. Except to this extent. The fruits, roses, flowers, and all of those portions that are patented, the portions that are sold of the plant are not propagatable. In the case of the potato, the portion that is sold as food is propagatable.

Mr. GREEN. That is all.

Senator HART. Thank you very much.

Mr. MEYER. I don't know if I am in order or not, but I would say the question asked before as to whether any present varieties were thought to be patented, I think they are already in the public domain, and I think on enforcement, anybody that applies for a patent should have to include the parentage, as to what parentage they used in breeding in order to get the patent, and if they just picked one up, they wouldn't know the parentage. They would have to have the records of parentage as to how they got the new variety.

I don't think enforcement is quite as much of a problem as has been brought out. I don't think that is the purpose of the hearing, as to how are you going to enforce it before you get the inequity removed.

Senator HART. I may at least by indirection have suggested that I thought enforcement might be relevant to this hearing.

Mr. MEYER. That is right, but as long as it was brought up——

Mr. MERCKER. Mr. Chairman, may I interpose a question? I do object to the word continually used "private breeders" in the Government's testimony. As I testified, we only have three private breeders in the United States.

Senator HART. I think the record is clear on that.

Mr. MERCKER. I wish they would change theirs to three breeders, and then testers.

Senator HART. I think we are getting into semantics, here. I think there is no criticism of the Department if there happened to be three individuals, and they say the individuals. The record does reflect your position that there are three.

Mr. MERCKER. With respect to cortisone, I want to call attention to that, that the Irish reap more potatoes per capita than any other nation in the world and have the lowest incidence of heart ailments.

Mr. SMITH. Mr. Chairman, there seemed to be some confusion about the interpretation of the sweet potato, whether or not it is eligible under present law for patenting, and if we believe the botanists who set the standards for us, nobody else, patent law, no one else included, our botanists—unless we use the Russian system, they change their science over there by law, and I don't believe we are ready for that—it says in section 161, "other than a tuber propagated plant."

A tuber is definitely stated in botanical literature as an enlarged stem. In botanical literature it definitely states that a sweet potato is an enlarged root.

Whatever interpretation has been put on it, the sweet potato now is eligible under the present law for patenting.

Senator HART. I am sure the Department will have some comment on that.

Mr. GREEN. Just what is actually the difference, though, between a sweet potato and a potato, what is the difference between an enlarged root and an enlarged stem?

Mr. SMITH. You would have to go deeply into micrology and histology to prove which it is. You must make very fine cross sections of each and observe it under the microscope. That is why we take the word of the botanists.

Mr. HOBBS. Since interruption seems to be in order, may I make a comment or two?

Senator HART. Yes.

Mr. HOBBS. On the question of whether the sweet potato is patentable or not, I wish to refer the committee to a letter written on March

12, 1959, to Senator O'Mahoney by the Department of Agriculture, in which the statement is made that technically the potato is a tuber, and the sweet potato is a fleshy root. Now, it is on that that I base my testimony that you could patent a sweet potato, because the Department of Agriculture is on record with this committee as saying that the sweet potato is not a tuber. A question was raised by the chairman of the committee as to whether a patent on the potato would increase the cost.

Again the Department of Agriculture has answered that question, and I read from the same letter:

> There is no evidence, however, that the patenting of plants has increased the cost of food to the consumer.

I don't understand the testimony of the last witness as to why the amendment of the act to include a tuber propagated plant would in any manner work against the laudable work of the Department of Agriculture. It would just mean there would be more people trying to get a better potato.

Senator HART. Mr. Commissioner, you may proceed.

STATEMENT OF HON. ROBERT C. WATSON, COMMISSIONER OF PATENTS

Mr. WATSON. Mr. Chairman, I have with me two members from the Patent Office.

Senator HART. I suggest that you identify youself for the record.

Mr. WATSON. Mr. Chairman, I have no prepared statement for the occasion, but we will be most happy to prepare one later if it is your wish in view of the testimony which has been given before the committee this morning.

May I say that Mr. Murphy, who sits on my right, is the supervisor over a chain of about 11 divisions in the U.S. Patent Office organization, and one of those divisions is presided over by Mr. Goldberg, who sits on my left, and it is in Mr. Goldberg's Division that the processing of applications for the patent for plants, under the plant patent law, takes place.

It may be of some value to establish a perspective, to give you some idea of how many plant patents have been issued since the enactment of the law.

During the period since 1930 we have issued 1,848 plant patents. During the last year, we issued more than during any preceding year, the total being 128. There are presently pending before Division 1, of which Mr. Goldberg is Chief, 71 applications.

During the course of the coming fiscal year, 1960—the present fiscal year—we will probably issue about 120. These plant patents are printed, ordinarily, in five colors, cost us about $256 for the printing operation, alone, for which we receive 204 copies, and we sell those copies at 25 cents apiece to the public, generally.

I think perhaps it would be appropriate for me to place in the record a few copies of those patents which are very beautifully worked out in most cases, and constitute in the Patent Office and elsewhere wall decorations which are very highly prized.

In the work of the Patent Office, as has been brought out by the testimony of a number of witnesses, the examination is conducted in the Examining Division in which Mr. Goldberg presides, and work

under him is done principally, if not wholly, by 1 examiner, out of the approximately 1,000 examiner assistants that we have now currently working in our Office, so that you see that the volume of business which we are doing in the processing of patent applications for plants and the issuing of those patents is rather small as compared with the total volume of business, and this year, for instance, we expect to issue about 54,000 patents, only 128 of which will be plant patents.

Now, Senator O'Mahoney in some informal correspondence suggested that we inform him of the nature of the impact which the proposal to enact this bill into law would have on the Patent Office, and we have already in an informal manner stated, and as you can readily imagine it would not have any great impact upon our operation, the number of applications for new varieties of potatoes which we might receive, no one could forecast with certainty.

My offhand guess, and Mr. Goldberg can perhaps supply his guess, would be that we might receive at first 10 or 12 applications, and that is just a guess. Nobody would know.

Now, the Patent Office can take care, very easily, of any increase in business which might eventuate from the enactment of the bill into law, and we see no good reason why the bill should not be favorably reported and enacted into law.

We have already granted many patents on many varieties of plants, and the fact that this would cover a food product appears to us to be immaterial. The incentive which the patent system provides the inventor, the researcher, if carried into foods would only indicate that it is desirable to have more, better, and cheaper foods, and the way you realize an objective of that nature is to offer the reward of the patent.

The greater the need for progress, the more important it is to offer the incentive of the patent, so in the event that it is possible for workers in the agricultural field to develop potatoes which are superior to those which are presently available, to the public, the objective of the bill is highly appropriate.

If by enacting the law, persons in industry, under our system of free enterprise, can be induced to spend the money necessary to develop new potatoes, then the bill would be a success. Even if one potato of superior quality eventuated as a result of the passage of the bill, and one only, the bill would have served a useful purpose, so we have no reason to say that there is any substantial objection which we can perceive to the enactment of this proposed legislation.

Now, the point has been raised a number of times, or the question has been asked and perhaps fully answered, but I will ask the question and answer it again.

Would it be possible, if the proposed bill becomes law, for someone to patent a potato which is presently available to the public, and withdraw it from the public domain?

I would call your attention to two sections of the patent law which would seem to cover that situation. In section 161 of title 35 of the patent law which became effective January 1, 1955, and immediately following that clause which has been so frequently discussed here, and which has the exception of the tuber-propagated plant, appears this sentence:

> The provisions of this title relating to patents for inventions shall apply to patent for plants except as otherwise provided.

In other words, the application for the patent for a plant is subject to all the requirements of law imposed upon other applicants, machines, processes, compositions, and so on, with a minor exception which doesn't have to really be mentioned.

Now, among the conditions which are imposed upon all applicants for patents are those which are recited in section 102 of title 35, entitled "Conditions for Patentability, Novelty, and Loss of Right to Patents."

> A person shall be entitled to a patent unless, first, the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country before the invention thereof by the applicant for patent, or, second, the invention was patented or described in a printed publication in this or a foreign country or in public use, or on sale in this country more than 1 year prior to the date of the application for the patent in the United States.

And then it recites a number of other provisions, but those are the most pertinent ones, which would make it impossible for anyone to take from the public that which it already has.

We buy potatoes today freely on the market and have for generations, and that right of the public to purchase potatoes would not in any way be infringed.

Now, the applicant to successfully develop a new species and secure a patent would be in a favorable position, he would be in as favorable position as any other patentee, but the public has the last say. The fact that the patent issues compels the public to do nothing. The patentee must exploit his invention—either him or through his agent or licensee or assignee, and the public will not buy that which it will not believe to be the best product for the price, so assuming that a patentee of a potato has indeed a superior potato, he will derive no benefit from his patent unless his price is reasonable, because of the fact that there are available to the public at this time, and will always be all of the other varieties which can be found anywhere in any market, and no patent which can hereafter issue can infringe the public's right in that respect, so there is no danger that I can foresee in granting the patent from that point of view.

Now, that about concludes my remarks. Mr. Goldberg is the one who daily deals with the problem, and he is the one who has the day-by-day contact with the Department of Agriculture, so you may wish to ask him some questions.

Senator HART. Before any questions, Mr. Goldberg, is there any statement you wish to make?

Mr. GOLDBERG. None whatsoever.

Senator HART. Mr. Murphy?

Mr. MURPHY. No, sir.

Senator HART. All right.

Mr. GREEN. One question. There has been reference to the fact that in foreign countries the potato is patentable. What is your knowledge as to that, how widespread is it?

Mr. WATSON. I have no knowledge that there exists in any foreign country a law comparable to that proposed here. Mr. Goldberg has just informed me that patents for potatoes, however, are issued in several foreign countries. France, I believe, Belgium and what is the other?

Mr. GOLDBERG. Holland. Not for potatoes, for plants.

Mr. WATSON. Apparently under their general laws. Now, I can look that question up and supply that information as to whether or not other countries have already enacted laws which permit them to grant patents for plants.

Senator HART. We assume if we do not hear to the contrary, these are the three countries.

Mr. GREEN. Has there been a patent issued so far as you know for a sweet potato?

Mr. GOLDBERG. There has never been an application filed, and, of course, no patent has been granted on one. The question has never confronted me.

Senator HART. After this morning, I am sure you will not be taken by surprise if a debate on a patent for a sweet potato develops.

Mr. WRIGHT. One question I would like to ask, based on the pamphlet that you issued entitled "General Information Concerning Plant Patents." In paragraph 7 on page 2 of that publication, No. 7 is "What is a sexual reproduction and why is it specified in the plant patent?", and then in the last two sentences of the answer you say:

> Plant varieties that produce true to seed are not patentable. The reason why such plants are excluded is believed to be because Congress did not desire interference with the flow of trade in grains in which the seeds themselves are used for food.

The question that raises in my mind is whether or not all of the arguments that have been made here in favor of patenting potatoes would not also be equally applicable to the desirability of patenting various types of grains, let's say wheat, oats, the seed-propagated plants.

Mr. GOLDBERG. Well, it would seem that the same argument would be applicable, but the statute, itself, excludes propagation other than those that may be reproduced asexually, and therefore even if it were proposed to have grains like wheat, alfalfa, and so on, patentable, it could not be done unless the act was further amended to exclude the asexual limitation.

Mr. WRIGHT. That is what I was suggesting, whether the reasons you have advanced here for taking out the tuber-propagated exclusion, which now excludes potatoes, wouldn't also apply to eliminating the seed reproduction exclusion which excludes the grains.

Mr. WATSON. Perhaps the matter can be answered by saying, as I think I have already attempted to make clear, that if you want more and better products of any nature, the incentive which the patent law provides should be allowed to prevail.

Now, I am unable to answer specifically your question. Take the grain. If we want more grain per acre, better grains, more nutritious, and so on, a reward for the man who wishes to engage in the research could well be provided unless there are good reasons for not extending to him the privileges of other persons engaged in other lines of research.

But just why they eliminate all except the asexually-reproduced plants I will leave for persons more learned in this art than I am to answer.

Mr. Murphy would like to make a comment at this time.

Mr. MURPHY. I believe, Mr. Chairman, and Mr. Wright, Mr. Goldberg explained to me yesterday the difference between reproduction sexually and asexually, the point being in grains, where reproduction is by seed, the thing reproduced is not exactly the same as that from which it came, while in the case of asexual reproduction, it is,

and that is one of the reasons that sexual reproduction, that is of grains, was excluded from the act in the first place.

Mr. GOLDBERG. That is right.

Mr. MURPHY. I believe Mr. Goldberg will back me up on that.

Senator HART. Mr. Goldberg has nodded his agreement.

Mr. GREEN. If I understand that correctly, if it is reproduced asexually, it will continue——

Mr. MURPHY. The same strain again. That is, as I understand it, in the case of a potato, say, we have the tuber under the ground, of course, and at a certain time of the year, the grant can go to seed.

Actually, I understand, you could get reproduction from that seed above, but the way the reproduction is ordinarily done is from cuttings of the tuber, which again is the food.

If we did produce a potato with some disease immunity, if we reproduced from seed we wouldn't necessarily get that again, but reproducing it asexually, I understand we would. That is why we would patent the thing, because every time we get something, we get the thing we patented, not something different.

Senator HART. Gentlemen, thank you very much.

Mr. GREEN. For the record, if you will recall earlier this morning at the commencement of the hearing, the names of the various witnesses were called, and some did not answer. I should like to determine at this point if any of those witnesses happen to be here.

Mr. A. R. Miesen, Mr. Don Palmer, Mr. Bruce Gray, Mr. Mat W. Felton, Mr. Lowell H. Swenson, Mr. Harold Kutzner.

I believe there have been some communications come in from several of the witnesses and at this time I should like to ask permission of the Chair to make them a part of the record, along with such other documents as have been furnished to us.

Senator HART. That may be done.

(The material referred to appears in the appendix of the hearings.)

Mr. MEYER. Mr. Chairman, if I am not out of order, you asked what the impact would be. I have had the job of determining how much budget our research department gets each year, and for 7 years I have kept saying when are you going to come up with something we can really start to use?

Now, after 7 years, they have three they think are potential. They figure it will take 2 to 3 more years to do the testing before they are going to tell me if we have one that we want to apply for a patent for.

There are only three at the present time. I don't think that there will be a flood of applications, from our side I can foresee at the most one a year, and I would be happy if we got that much. I would think more in terms of one every 3 to 5 years.

Senator HART. You would then agree that Commissioner Watson was not overly conservative in his estimate?

Mr. MEYER. I would agree, and in fact I believe the time to correct the inequity is now, when we do not have any at the present time which we expect to apply for. I have found in the past it is better to do these things in advance rather than when you have them ready.

Senator HART. All of the witnesses who had asked for an opportunity to testify having been heard, or not having appeared, I would conclude the hearing at this point, but make the statement that the record would remain open for a period of not to exceed 10 days. In that period, if anyone who has an interest would care to supplement or clarify their statements, those statements will be received and made a part of the record.

I announced at the outset my regret that the chairman, Senator O'Mahoney, could not be here. I have been protected in the conduct of this hearing very capably by Mr. Green and Mr. Wright, and I also would again repeat that Senator Wiley, a member of the Senate Committee on Foreign Relations, has not been able to be here, but the hearing I think in fairness should be described as one called at his very strong urging, and I am grateful that we were able to have Mr. Gibbons with us.

There being nothing further before the committee, we will stand adjourned.

(Whereupon, at 12:20 p.m., the subcommittee adjourned, subject to call of the chair.)

APPENDIX

(Senator Morse was not able to attend the hearing, however, the following statement was submitted:)

STATEMENT OF SENATOR WAYNE MORSE

Mr. Chairman, I appreciate this opportunity to appear before your subcommittee to testify in behalf of S. 1447. For many years in the Senate I have consistently supported the principle that the protection of substantive rights can only be achieved through the procedural rights which are available to the individual. S. 1447 is designed to provide the procedures whereby those who are working in the field of research may protect their rights in the benefits created through extended periods of work and research. Under this bill they would be given rights equivalent to that enjoyed by horticulturists in other segments of agriculture.

You will note that enactment of S. 1447 will not require the expenditure of Federal funds, nor does it even envisage an extension of any existing Federal service. Its purpose solely, as I have said, is to extend equal treatment in the field of patents to those who are striving to improve the strains of potatoes; it removes the tuber exclusion provision of the Plant Patent Act.

I might add, Mr. Chairman, that those of us from Oregon who have been privileged to partake of the Klamath and Deschutes netted gem variety are convinced that the Oregon potato at present reaches toward perfection. However, we wish to assure you that should an even better potato be grown, difficult though this may be to achieve, the originator thereof ought, in all fairness, receive the just reward and protection that a patent would afford.

I have been assured that this legislation has the support not only of the National Potato Council as well as certified seed producers and processers in my own State.

I have brought to the attention of the subcommittee the letter of Mr. Don Palmer, administrator of the Oregon Potato Commission urging that S. 1447 receive favorable consideration by your subcommittee.

I thank you.

DEPARTMENT OF COMMERCE,
PATENT OFFICE,
Washington, June 15, 1959.

Subject: Plant patents.

Mr. GEORGE S. GREEN,
Counsel, Senate Committee on the Judiciary,
Washington, D.C.

DEAR GEORGE: I am sending you herewith a list of those plants for which we have issued patents heretofore. Tulips, like lilies, iris, etc., are patentable under the present Patent Act but so far no one has ever applied for a patent on a tulip, so I am informed.

I am trying to ascertain the present disposition of the Agriculture Department with respect to the proposed law which would make potatoes patentable. So far have not received information on this subject. We will endeavor to prepare ourselves to testify at any hearing which you may call to receive the views of interested parties in connection with Senator Wiley's bill which will permit the patenting of potatoes.

Sincerely yours,

ROBERT C. WATSON, *Commissioner.*

LIST OF PLANTS THAT CAN BE PATENTED

Aster	Fuchsia	Nasturtium
Azalea	Gaillardia	Pansy
Begonia	Gardenia	Peony
Buddleia	Geranium	Phlox
Camellia	Gladiolus	Poinsettia
Carnation	Heliotrope	Rose
Chrysanthemum	Hibiscus	Snap Dragon
Clematis	Hydrangea	Verbena
Dahlia	Iris	Veronica
Daisy	Lantana	Viburnium
Daphne	Lilac	Viola
Delphinium	Lily	Violet
Dianthus	Lily of the Valley	Water Lily
Freesia	Lobelia	Weigela

DEPARTMENT OF COMMERCE,
PATENT OFFICE,
Washington, July 13, 1959.

MR. GEORGE S. GREEN,
Counsel, Senate Committee on the Judiciary,
Senate Office Building, Washington, D.C.

DEAR GEORGE: In response to a question asked by Senator Hart during the hearing on Senate bill 1447 before the subcommittee of the Judiciary Committee on Patents, Trademarks, and Copyrights, the following information concerning the patent laws of foreign countries regarding plant patents is submitted for the record.

In Germany, since 1934, so-called plant patents have been granted on methods of breeding plant varieties, and producing seed, as well as on specific plants, such as rose varieties, strawberry varieties, etc. These patents have been granted under the basic German patent law which does not exclude new plant varieties as subjects of patent protection. The first sentence of the German patent law states that "Patents are granted for inventions which can be commercially exploited." It is to be noted that the German Patent Office has a standing committee dealing with the problem of patenting plant varieties which committee meets regularly with plant breeders. In Germany there is no apparent limitation as to asexual reproduction, as exists in the U.S. plant patent statute (35 U.S.C. 161).

The Union of South Africa, since 1952 extended the coverage of its patent laws to include new patent varieties. As in the United States, protection is granted for plants propagated asexually.

In the Latin countries, such as France, Belgium, Luxembourg, and Italy, patents on new plant varieties are granted under basic patent law. However, in Italy there is now under consideration a plant patent law which would, in effect, be a supplement to the present basic patent law.

In Denmark, there is great interest in the possibility of patenting new plant varieties, and in 1955 a draft of a plant patent law was submitted to the Danish Board of Trade.

Great Britain has no specific plant patent law and does not grant patents on new plant varieties under the basic patent law.

In each of the above-mentioned foreign countries where patents are granted on new plant varieties, it would appear that there is no restriction insofar as granting of patents on a new variety of potato is concerned.

I hope that this information will be sufficient for the purpose of the committee and will answer the questions raised by Senator Hart.

With kind personal regards,

Sincerely yours,

ROBERT C. WATSON, *Commissioner.*

IOWA STATE VEGETABLE GROWERS' ASSOCIATION,
Ames, Iowa, July 7, 1959.

Senator JOSEPH C. O'MAHONEY,
Senate Offices, Washington, D.C.

MY DEAR SENATOR O'MAHONEY: I have been asked by opponents of the extension of the plant patent law to cover potatoes to write you on the subject.

I made quite a study of the thing for the Packer, the syndicated produce paper. I discussed it with research men; with a nurseryman, who has dealt in patented roses; and with one man who has bred potatoes privately. I am familiar with the Red Dot Food organization of Madison, Wis., and I know its potato breeder Dr. F. J. Stevenson. I am the central office man of the organization, which for 30 years has gotten Federal money from Congress for the breeding of potatoes. I was at Dr. Stevenson's farm near Rhinelander a year ago. I know that the present breeders of potatoes in USDA are opposed to the extension of the act.

My judgment is that a plant patent for potatoes is not worth the trouble of getting it. No patent of any kind is of use unless the inventor has the money himself, or has a reliable partner, who has the money to defend the patent. In the case of potatoes, the new variety, for which a patent is desired, must be thoroughly tried out with growers and the ability of the variety proven to be superior, or else the inventor cannot sell his stock of the seed of the variety for a price high enough to help cover the costs of breeding the variety. By the time these tests have been made, the seed will be in many hands. Also, potatoes are reproduced by nature and may be produced in almost any field, anywhere. Potatoes do not have to be produced in factories or by lathes or other factory machinery. The product is often 20 times the seed used, so that the market can quickly be supplied or oversupplied with the variety.

Red Dot Foods, of Madison, Wis., appears to be the organization which is pushing the extension of this patent law to include potatoes. If Dr. Stevenson brought with him from his work as potato breeder for USDA at Beltsville any of the breeding stock that had been developed by the Government, neither he nor Red Dot Foods could patent the product of such seed from the Beltsville Station of USDA. If even a nickel of Federal money went into production of the new variety, it would not be patentable. The theory is that everything the Government pays for belongs to all the people. Dr. Stevenson has not been with Red Dot Foods long enough to have produced a new variety of potatoes worth patenting. This extension of the law, so far as Red Dot Foods are concerned, could apply only some years in the future.

Very truly yours,

C. L. FITCH, *Secretary-Treasurer*

WINTER PARK, FLA., *July 11, 1959.*

Re S. 1447.

GEORGE S. GREEN,
Professional Staff Member, Subcommittee on Patents, etc.,
Senate Committee on the Judiciary.

DEAR MR. GREEN: At pages 84 and 85 of the transcript of the hearing on July 9, the chairman stated that "the record would be kept open for a period not to exceed 10 days. In that period if anyone who has an interest would care to supplement or clarify their statements, those statements will be received and made a part of the record."

Pursuant to such permission, I desire to add the following supplemental comments:

The tenor of the position of the Department of Agriculture (Tr., pp. 55–57) is that its potato-breeding program would suffer if the bill becomes law. To carry conviction, such statement should be supported by sound reasons why such result reasonably might be anticipated. No reason is given.

It cannot be assumed that an agency of the United States desires, at the expense of free enterprise, to perpetuate for itself, at public expense, the efforts to secure a better potato; yet such would be the obvious result if the Department's opposition to S. 1447 were to succeed.

While it is not of major consequence whether the sweet potato is a tuber, the Department of Agriculture has three positions on the record: (1) It is a tuber (Tr., pp. 55 and 57); (2) It is not a tuber (letter of March 13, 1959, to Senator O'Mahoney, Tr., p. 71); (3) Mr. Cullinan would not commit himself (Tr., pp. 61, 62, 63).

In the Plant Patent Act the term "tuber" is used in its strict horticultural sense (Senate Committee Rept. No. 315, 71st Cong., 2d sess., Apr. 2, 1930).

Dr. Ora Smith, of Cornell, gave the definite answer. The sweet potato is not a tuber, and is presently included in the act (Tr., pp. 25, 70).

The letter of March 13, 1959, from the Assistant Secretary of Agriculture, Mr. E. L. Peterson, to Senator O'Mahoney does not in terms oppose the amendment; but only raises questions which the record has answered. The question of enforcement is no different with the potato than with any other plant (Mr. Cullinan, Tr., p. 68).

It is not believed the record is entirely clear that there are plants other than the potato, artichoke, and taro which would be patentable subject matter if the amendment is adopted; namely, the canna, the caladium, the tuberous begonia, the tuberose, the tuberous lilies, and others. There is no sound reason why a bulbous lily is patentable (Plant Patents No. 165 and 436, for example) but a new variety of a tuberous lily (*Gloriosa Rothschildiana,* for example) is not.

The record is abundantly clear that the passage of S. 1447 would not put a burden on either the Patent Office or the Department of Agriculture (Tr., pp. 75, 84).

These comments are closed with the recital of a single paragraph from the statement of the Honorable Robert C. Watson, Commissioner of Patents (Tr., p. 76).

"If by enacting the law, persons in industry, under our system of free enterprise, can be induced to spend the money necessary to develop new potatoes, then the bill would be a success. Even if one potato of superior quality eventuated as a result of the passage of the bill, and one only, the bill would have served a useful purpose, so we have no reason to say that there is any substantial objection which we can perceive to the enactment of this proposed legislation."

Respectfully,

M. K. HOBBS, *Attorney at Law.*

WINTER PARK, FLA., *August 24, 1959.*

Re S. 1447.

Hon. GEORGE S. GREEN,
Professional Staff Member, Subcommittee on Patents, etc., Senate Committee on the Judiciary, New Senate Office Building, Washington, D.C.

DEAR MR. GREEN: The patent, trademark, and copyright law section of the American Bar Association adopted a resolution in support of S. 1447 and H.R. 6175. A copy of that resolution as it appears on pages 22 and 23 of the printed report of the section, is enclosed herewith.

From information I have received, I consider it highly probable that the resolution will be approved at the annual meeting of the association.

Cordially yours,

M. K. HOBBS, *Attorney at Law.*

ITEM 11. PLANT PATENTS

"*Resolved,* That the section favors the principle of extending coverage of plant patents to tuber propagated plants, and more particularly favors the enactment into law of S. 1447 and H.R. 6175 which are companion bills of the 86th Congress so providing."

PREVIOUS SECTION ACTION

None on this issue. (1954 section action approved extension of protection to seedlings and such became the law of September 3, 1954. But that's the only section action in the area.)

"Tuber" as used in the present statute does not cover bulbs, corms, stolons, or rhyzomes, but is restricted to its narrow horticultural meaning, such that in practical effect its application appears to be to the potato (other than sweet potato which is not a tuber), Jerusalem artichoke, caladium, canna, spider lily, taro, tuberrose, and dasheen, among important commercial plants. The list includes nonfoods as well as spuds. The best and only reason brought to the committee's attention as to why tubers were excluded from the original act in 1930 appears in that act's own legislative history:

"This exception is made because this group alone, among asexually reproduced plants, is propagated by the same part of the plant that is sold as food."

By contrast the patent law permits patents on the sweet potato, which is not a tuber, on the trees which produce the apple, the cherry and the orange, on breakfast food, on drugs and vitamins. Thus the best reason known to the committee for the tuber exception is not consistently applied.

In support of the original act in 1930, Congressman Cannon argued that there is no greater benefactor to the human race than the man who produces a new fruit or vegetable. Are potatoes and other tubers any different from "fruits and vegetables"?

The general reasons for the patent system are as applicable to tubers, as to nontubers and TV sets. The Commissioner of Patents says that elimination of the "tuber" exception would present the Patent Office with no problems, and further:

"No justification can be seen in not granting a patent to one who had developed a new food, and specifically a new and distinct variety of potato * * * (Such a grant) is to me proper and fitting. The Patent Office can offer no valid opposition to this proposal."

It is to be noted that the two bills above referred to amend title 35, United States Code, section 161 only by the mere elimination of "other than a tuber-propagated-plant" phrase. The Patent Law Revision Committee approves the two bills and urges the adoption of the resolution.

HASTINGS, FLA., *March 19, 1959.*

Hon. GEORGE A. SMATHERS,
U.S. Senate, Washington, D.C.

DEAR SIR: As you know, the Plant Patent Act in its present form prohibits patents on tuber-propagated plants, thus denying to the potato grower the benefits of patent protection.

I urge you to support Senator Alexander Wiley, of Wisconsin, in his proposal for an amendment to the Plant Patent Act, which is a bill to amend section 161, title 35, United States Code.

I believe that this will be of great help to the potato industry and will correct the discrimination which now exists.

Sincerely yours,

BRUCE GRAY,
Member of USDA Potato Research and Marketing Advisory Committee.

GRAND FORKS, N. DAK., *April 16, 1959.*

Senator WILLIAM LANGER,
U.S. Senate, Washington, D.C.

DEAR SENATOR LANGER: May I commend to your attention and favorable action, Senate bill 1447? This bill has been recently introduced by Senator Wiley, of Wisconsin, to amend the present plant patent statute for inclusion of the potato.

The preface to the bill, pages 2 to 9, inclusive, covers the history of the Plant Patent Act and its purposes. Pages 10 to 13 explain the reasoning for excluding tuber propagated plants from patent rights granted to other plant.

It is my belief that in our present time there is now no sound and logical reason to exclude the potato from application under the act. And conversely there are very good reasons for inclusion as set forth in the proposed amendment, S. 1447. It would be in the interest of public policy.

As of today the Federal Government and many States are so extensively engaged in potato-breeding work that it has become virtually a monopoly. This field of endeavor is practically closed to private potato breeders for lack of financial incentive and benefits. Under the present act private breeders of apples, pears, peaches, many other horticultural fruits, as well as ornamentals are afforded patent protection rights. The potato breeder has none. This stifles individual private initiative.

The protection afforded through this amendment would stimulate private work in this field. Much of the expense and developmental work would be borne by private enterprise rather than by taxation.

Private potato breeders utilizing the store of basic research that has been so capably prepared by Federal and State workers are actually in a much better position to do the applied research work to evolve and discover still better varieties of potatoes than are now available. Governmental agencies I believe are actually hampered by the inherent nature of the problems involved in the commercial testing and the introduction of newly created varieties.

Some objections are being raised to this proposed amendment on the grounds of assumption that a potato plant patent would be difficult to enforce, and thus for the grantee to benefit therefrom. Should not the grantee have the right to solve such a problem himself rather than that he be excluded from the right to face it himself?

A potato plant patent would be in the interest of the public good rather than anti. No one through the means of a potato plant patent could gain control of, or increase the cost of this important common food. Varieties now available, many of which are very good, would make it impossible to gain anything approaching a monopoly of this food. The old established varieties such as the Cobbler, Russet Burbank, Bliss Triumph, White Rose, Early Ohio, McClure, and a number of others all having been developed by private potato breeders up to the early 1900's. Later the Red Pontiac, Katahdin, Kennebec, and a number of others were developed by the Federal Government and States after 1930. All of these are available most adequately.

It would be only the distinctly superior newly created varieties that could compete or even begin to supplant our present-day varieties and only then if because of competition there would be effected a reduction in cost of production.

With kindest regards and best wishes,

Sincerely yours,

BEN PICHA,
Member of the USDA Committee on Potato Research and Marketing.

NORTHERN PACIFIC RAILWAY CO.,
AGRICULTURAL DEVELOPMENT DEPARTMENT,
AGRICULTURE AND IMMIGRATION,
Fargo, N. Dak., April 30, 1959.

Senator WILLIAM LANGER,
Senate Office Building, Washington, D.C.

DEAR SENATOR LANGER: I would like to call your attention to Senate bill 1447 introduced by Senator Wiley, of Wisconsin, which pertains to the privilege of private plant breeders to patent their right to a specific new variety. In my opinion, the arguments used to throw out the right of a private plant breeder to patent his variety if he develops one is contrary to public policy and private initiative. We have some private plant breeders scattered all over the State and the only way those people have any way of obtaining remuneration for the painstaking work that is being done is the right for exclusive sale of their variety for a few years at least. The various experiment stations in the Government have gotten into this field, and they have so many people in the work now they feel they are the only ones to have the right to progress in this field.

We have one man in North Dakota, Ben Picha at Grand Forks, who has spent much time in this field, and I haven't been able to understand why he continues on except for the love of the work because I haven't been able to see where he has had an opportunity to receive any financial reward for his efforts.

If we still believe in private enterprise in this country, I think the bill should receive favorable consideration if and when it comes up in the Senate. I will appreciate it if you will give it some thought and consideration when the matter comes up before the Agricultural Committee or when it comes up for vote in the Senate.

The central part of North Dakota is extremely dry from Fargo to about Bismarck and an area about 50 miles north and south of the Northern Pacific Railway. There is enough moisture to start the crop and that is about all. In the southeast, grain is away to a good start. There is ample moisture in the northeast corner also, but the northwest is extremely dry, whereas South Dakota has a good supply of moisture for the time being at least.

With kindest personal regards, I am

Very truly yours,

A. R. MIESEN.

EXCELSIOR, MINN., *May 27, 1959.*

Senator JOSEPH O'MAHONEY,
Chairman, Patents Subcommittee, Senate Judiciary Committee, Senate Office Building, Washington, D.C.

DEAR SENATOR O'MAHONEY: I know that Mike Manatos has spoken to you of my two calls to him concerning S. 1447. You were on the floor at the time I called.

Very briefly, our position with respect to S. 1447 is as follows:

Basically, S. 1447 (and companion bill H.R. 6518) would amend section 161, title 35 of the United States Code, with respect to patents for plants. This law permits an individual or corporation to patent plants or seeds but specifically excludes tuberous plants such as potatoes, since it is a well-established scientific fact that there would be no practicable means available for implementing such patent protection. The proposed amendment would permit an individual or a corporation to patent a new variety of potatoes and would theoretically make it illegal for anyone but the patent holder to buy or plant seed from this variety of potatoes. Since implementation of such patent protection is not scientifically or legally possible, it might be argued, "What possible harm could the proposed amendment do to other potato growers, to the potato-chip industry, or to the public?" Obviously, it would give the holder of such a patent the right to advertise or to assign the right to advertise that only potato products, such as potato chips, dehydrated instant mashed potatoes, potato flour, and other potato products made from the patent holder's particular variety of potatoes, contain certain properties or offer certain consumer advantages.

The individual who is reported to have caused S. 1447 (and companion bill H.R. 6518) to be introduced is Fred Meyers, owner of Red Dot Potato Chip Co., Madison, Wis. This large snack-food manufacturer has distribution in many States. Mr. Meyers has recently employed Dr. Stevenson, retired, who for many years directed potato research for the U.S. Department of Agriculture at Beltsville, Md. The implications appear quite clear.

In our contacts with the rest of the potato-chip industry, with leading potato growers and potato growers organizations throughout the country, we find unanimous opposition to these proposed amendments.

My client, Old Dutch Foods, with general offices in the Flour Exchange, Minneapolis, and with plants in Grand Forks, N. Dak.; Minneapolis, Minn.; and Winnipeg, Canada; would greatly appreciate an opportunity to be heard when hearings are called on the above bill.

If you will have someone on your staff contact me at such time I will make the necessary arrangements to have qualified persons present and ready to be heard.

Thank you so much for your courtesy. I hope I shall be seeing you when I am in Washington later this summer. As you probably know, the weather back here, and in Wyoming for that matter, has been anything but normal this spring. I guess Washington is about as warm and humid as ever.

Best regards,

Sincerely,

LOWELL H. SWENSON.

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